

# ALVA'S INSTITUTE OF ENGINEERING & ECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri, D.K - 574225

Phone: 08258-262725, Fax: 08258-262726

Department of Computer Science & Engineering

REF-/AIET/CSE/ACA/2024-2025/4

Date: 26.09.2023

# Circular

It is hereby informed to all the Final Year students that, the following Advanced Learners were considered as a Team Leaders for the various batches of Final year projects for the Academic Year 2023-2024. In this regard, all the team leaders are hereby informed to attend the session on "3D Modelling and Game Development" on 03<sup>rd</sup> Oct, 2023 at 9.30 AM.

CC to:

Principal Office

Dept.Notice Board

Various club Coordinators

Circulation to All Dept.faculty

Class Rooms

Head of the Department

Dept. of Computer Talence & Engineering

Alva's Institute of Engineering and Technology

Mijar, Moodubidite - 574 225, D.K. Karnataka, India



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

# Technical Workshop Report: 3D Modelling and Game Development

Date: 3rd October 2023

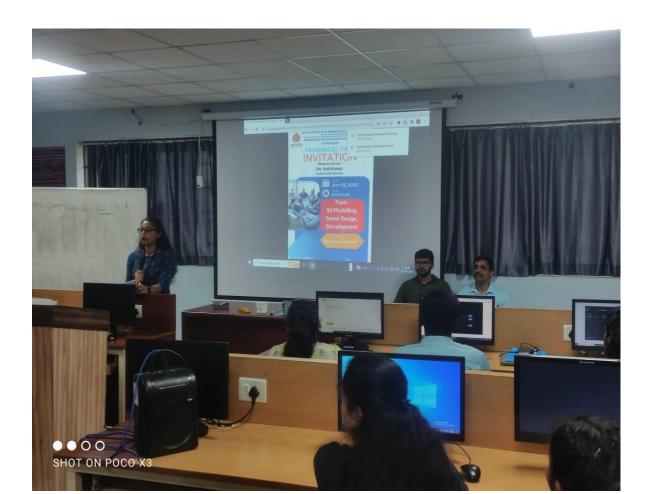
Venue: DBMS Lab, Department of Computer Science and Engineering, AIET

Time: 9:30 am

Resource Person: Mr. Anil Rokhade, Freelancer, Ranebennur

The Technical Workshop on 3D Modelling and Game Development, organized by "C maniax" Department of Computer Science and Engineering, AIET, was successfully conducted on 3rd October 2023. The workshop took place in the DBMS Lab, commencing at 9:30 am.

The event began with an inauguration ceremony where the Head of Department, Dr. Manjunath Kothari, delivered a presidential address highlighting the importance of game development and its future prospects. The Chief Guest, Mr. Anil Rokhade, a renowned freelancer from Ranebennur, shared his expertise and insights on 3D modeling and game development with the gathering.





Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

During the workshop, Mr. Anil Rokhade covered various topics related to game development, including the Unity 3D framework and other essential tools and techniques. Participants gained hands-on experience in designing and developing interactive 3D models



for games.

The workshop witnessed active participation from students who showed a keen interest in the field of game development. The practical sessions and demonstrations allowed them to explore the creative possibilities of 3D modeling and understand the process of game development from scratch.

The event was a great success, providing an excellent platform for students to enhance their skills in 3D modeling and game development. We extend our sincere thanks to Mr. Anil Rokhade for sharing his expertise and making the workshop engaging and informative. We express our gratitude to all the participants for their enthusiasm and active involvement. "C maniax" Department of Computer Science and Engineering aims to organize more such



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225
Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

workshops in the future, equipping students with the knowledge and skills required in the ever-evolving field of game development.





Shobhavana Campus, Mijar, Moodbidri, D.K - 574225
Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

# Technical Workshop Report: Cyber Security and Ethical Hacking

Date: 16th and 17th October 2023

Venue: DBMS Lab, Department of Computer Science and Engineering, AIET Resource Person: Mr. Samarth Bhaskar Bhat, Reverse Engineering Infosec, Bengaluru

**Collaboration: IEEE Student Chapter, AIET** 

The Technical Workshop on Cyber Security and Ethical Hacking, organized by "C maniax" Department of Computer Science and Engineering, AIET, in collaboration with the IEEE Student Chapter, was successfully conducted on 16th and 17th October 2023. The workshop was held in the DBMS Lab.

The event commenced with an inaugural ceremony where the Head of Department, Dr. Manjunath Kothari, delivered a presidential address. Chief Guest, Mr. Samarth Bhaskar Bhat from Reverse Engineering Infosec, Bengaluru, addressed the gathering. Dr. Aslam B Nandyal, Forum Coordinator of "C maniax," expressed gratitude through the vote of thanks. The inauguration ceremony also witnessed the presence of members from the IEEE Student Chapter.





Shobhavana Campus, Mijar, Moodbidri, D.K - 574225
Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)



During the workshop, Mr. Samarth Bhaskar Bhat covered various essential topics related to ethical hacking, including the usage of Kali Linux and other related tools. Participants gained valuable insights into the world of cyber security and explored the techniques and practices of ethical hacking. The workshop was a great success, providing students with practical knowledge and hands-on experience in the field of cyber security. The collaborative effort of "C maniax" Department of Computer Science and Engineering and the IEEE Student Chapter enhanced the overall learning experience. We extend our sincere thanks to Mr. Samarth Bhaskar Bhat for





Shobhavana Campus, Mijar, Moodbidri, D.K - 574225
Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

sharing his expertise and making the event a memorable one.

The Session wise content details have been provided below.

- Introduction to Cyber Security & Ethical hacking

<ul> <li>Misconceptions of Hacking</li> <li>Reason why everything can be hacked?</li> </ul>	2 Hours
- Why is Cyber Security Essential?	
- What are the skills required for cyber security profession?	
<ul> <li>Top industrial Certifications</li> <li>How to bridge the gap between campus and company placements?</li> </ul>	
<ul><li>How to start with Cyber security?</li><li>What is a CTF competition?</li></ul>	2 Hour s
- Applications of cyber security	



Alva's Institute of Engineering & Technology Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

	î .
- What is Vulnerability Assessment?	
- How can we find vulnerabilities?	2 Hours
- VAPT Approach	
- Internal / External Tests	



Alva's Institute of Engineering & Technology Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

<ul><li>What is Penetration Testing?</li><li>Exploit development</li></ul>	2 Hours
<ul> <li>Hands on session on solving various basic CTF challenges.</li> <li>Machine 1 – sunset</li> <li>Machine 2 – dina</li> <li>Machine 3 – Mhz</li> </ul>	2 Hours
<ul> <li>Machine 4 – lazysysadmin</li> <li>Machine 5 – covefefe</li> <li>Machine 6 – basic pentesting</li> </ul>	2 Hours
<ul> <li>What is Digital Forensics?</li> <li>Need for Digital forensics</li> <li>Forensics Categorization</li> </ul>	2 Hours



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225
Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

This workshop was a stepping stone towards enriching the participants' understanding of the growing field of cyber security. We express our gratitude to all the participants and look forward to organizing similar events in the future to continue fostering knowledge and skills in this domain.



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

# ONE DAY WORKSHOP ON WEB SCARPING



**Date: 2nd December 2023** 

**Venue: DS LAB, AIET** 

#### Introduction:

The one-day technical workshop on "Web Scraping" conducted on December 2, 2023, featured two esteemed speakers, Dr. Prathviraj N, Associate Professor at MAHE Manipal, and Prof. Raghudathesh G P, Assistant Professor - Senior Scale at MAHE Manipal. The workshop aimed to equip participants with the skills and knowledge necessary for effective web scraping, a crucial aspect of data extraction and analysis in today's digital era.



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

The event commenced with an inaugural ceremony where the Head of Department, Dr. Manjunath Kothari, delivered a presidential address. Chief Guest, Dr. Prathviraj N, Associate Professor at MAHE Manipal, and Prof. Raghudathesh G P, Assistant Professor - Senior Scale at MAHE Manipal, addressed the gathering and proceeded further with the technical workshop with the enthusiastic students.



# Agenda:

The workshop encompassed a diverse range of topics related to web scraping, offering participants a comprehensive understanding of the subject. The agenda included:

# Introduction to Web Scraping:

Dr. Prathviraj initiated the workshop by providing an overview of web scraping, highlighting its significance in data collection for research, business



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

intelligence, and other applications. The session set the stage for a deeper exploration of the subject.

Web scraping, also known as web harvesting or web data extraction, is the process of extracting data from websites. It involves gathering specific data from web pages and copying it into a central local database or spreadsheet for later retrieval or analysis

## **Techniques for Web Scraping**

- 1. **Web Crawling:** It involves fetching web pages for later processing. Web crawlers, also known as web spiders or bots, navigate through websites and follow links to fetch pages.
- 2. **HTML Parsing**: HTML parsing involves using JavaScript to target a linear or nested HTML page. It is a powerful and fast method for extracting text, links, and other resources from web pages.
- 3. **DOM Parsing**: The Document Object Model (DOM) defines the structure, style, and content of an XML file. DOM parsers are used to view the structure of web pages in depth. They can access nodes that contain information and scrape web pages using tools like XPath.
- 4. **Web scraping software**: Web scraping software tools are designed to simplify the process of extracting data from websites. These tools provide various features and functionalities to make web scraping easier and more efficient.

# Tools and Technologies:

Prof. Raghudathesh delved into various tools and technologies commonly used in web scraping, including popular libraries such as Beautiful Soup and Scrapy. Practical demonstrations and hands-on exercises were incorporated to enhance participants' proficiency.

# Parser and its types

A parser is a program or tool that analyses the structure of input data according to a specified grammar or set of rules. It takes the input data and breaks it down into smaller components, allowing further processing or understanding of the data.



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

- 1. Top-Down Parser
- 2. Bottom-Up Parser
- 3. Recursive Descent Parser
- 4. LL Parser
- 5. LR Parser

Beautiful Soup is a popular Python library used for web scraping and parsing HTML and XML documents. It provides a convenient way to extract data from web pages by navigating and searching the parse tree.

## Ethical Considerations in Web Scraping:

Both speakers emphasized the importance of ethical web scraping practices. The session covered legal and ethical considerations, responsible data usage, and the impact of web scraping on websites. Discussions revolved around maintaining integrity while extracting information from online sources.

# Advanced Web Scraping Techniques:

The workshop delved into advanced techniques in web scraping, covering topics like handling dynamic content, working with APIs, and dealing with challenges posed by anti-scraping measures. Prof. Raghudathesh provided real-world examples and case studies to illustrate these advanced concepts.

# Interactive Session and Q&A:

An interactive session allowed participants to engage directly with the speakers. Questions ranged from practical challenges in web scraping to ethical dilemmas. Both speakers provided insightful answers and practical solutions, fostering a collaborative learning environment.

# Importance of the Workshop:

The workshop on web scraping addressed the growing demand for skills in data extraction and manipulation. Dr. Prathviraj and Prof. Raghudathesh provided a well-rounded understanding of the technical and ethical aspects of web scraping, empowering participants with the knowledge needed to navigate this complex domain.



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

The practical demonstrations and hands-on exercises allowed participants to apply the concepts learned during the workshop, reinforcing their understanding of the material. The ethical considerations highlighted by the speakers were particularly well-received, as participants recognized the importance of responsible data extraction in the age of information.

## Uses of Beautiful Soup:

- **Purpose**: Beautiful Soup is primarily used for extracting data from HTML and XML files. It simplifies the process of parsing and navigating the document structure.
- **Features**: Beautiful Soup offers various features, including:
  - Parsing: Beautiful Soup can parse HTML and XML documents and create a parse tree that represents the structure of the document.
  - Navigation: It provides methods to navigate the parse tree, such as accessing tags, attributes, and text content.
  - Searching: Beautiful Soup allows you to search for specific elements or patterns within the parse tree using CSS selectors, regular expressions, or custom filters.
  - Modifying: You can modify the parse tree by adding, modifying, or removing elements and attributes.
  - o Pretty printing: Beautiful Soup can format the parse tree in a visually appealing way, making it easier to understand and debug.
- Compatibility: Beautiful Soup is compatible with various Python parsers, including the built-in html.parser, lxml, and html5lib. It automatically selects the best parser available on your system.

#### Feedback and Future Directions:

Participants expressed their satisfaction with the workshop, acknowledging the relevance of the content covered and the expertise of the speakers. Suggestions for future workshops included more in-depth sessions on specific tools,



Phone: 08258-262725, Fax: 08258-262726

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

advanced applications of web scraping, and opportunities for collaborative projects.

#### Conclusion:

The one-day technical workshop on web scraping, led by Dr. Prathviraj N and Prof. Raghudathesh G P, provided an enriching experience for participants seeking to enhance their skills in data extraction. The event not only addressed the technical nuances of web scraping but also emphasized the ethical considerations essential for responsible data practices. The success of the workshop underscores the growing importance of web scraping skills in today's data-driven landscape. Introduction to Web Scraping



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

# ONE DAY WORKSHOP ON: TEXT ANALYTICS AND NATURAL LANGUAGE PROCESSING



Date: 22-12-2023

Venue: AIET, Auditorium

#### Introduction:

The Technical Workshop on Text Analytics And Natural Language Processing, organized by "C maniax" Department of Computer Science and Engineering, AIET, in collaboration with the IEEE Student Chapter, was successfully conducted on 22<sup>nd</sup> December 2023. The workshop was held in the AIET Auditorium.

The event commenced with an inaugural ceremony where the Head of Department, Dr. Manjunath Kothari, delivered a presidential address. Chief Guest, Dr. Kavitha Karimbi, addressed the gathering. Dr. Chandra Naik, expressed gratitude through the vote of thanks.



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

The one-day technical workshop on "Text Analytics and Natural Language Processing" was conducted successfully, featuring Dr. Kavitha Karimbi Mahesh, Associate Professor at MAHE Manipal, as the distinguished speaker. The event aimed to provide students with insights into the evolving field of Natural Language Processing (NLP) and its applications in text analytics.

The workshop covered a range of crucial topics, each shedding light on different aspects of NLP and Text Analytics. The sessions were designed to cater to both beginners and those with some prior knowledge in the field. The agenda included:

#### Introduction to NLP:

Dr. Kavitha initiated the workshop by providing a comprehensive overview of Natural Language Processing, emphasizing its significance in today's technological landscape. She highlighted its applications in various domains, from chatbots to sentiment analysis.

#### Text Preprocessing Techniques:

The importance of preparing textual data before analysis was underscored during this session. Various techniques for text cleaning, tokenization, and stemming were discussed, offering attendees practical insights into data preprocessing.

#### Feature Extraction and Representation:

Understanding how to represent textual data in a format suitable for machine learning models is critical. The workshop delved into techniques such as Bag of Words (BoW), Term Frequency-Inverse Document Frequency (TF-IDF), and word embeddings.

#### Sentiment Analysis:

Dr. Kavitha demonstrated the application of NLP in sentiment analysis, showcasing how businesses use this technique to understand customer opinions and feedback. Practical examples were shared, providing a hands-on perspective.

#### Named Entity Recognition (NER):

NER, a fundamental task in NLP, was discussed in detail. The session covered how to identify and classify entities such as names, organizations, and locations within a text, showcasing its relevance in information extraction.

#### Interactive Session and Q&A:



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

The workshop encouraged active participation through an interactive session where students had the opportunity to work on small exercises. Dr. Kavitha addressed queries and provided valuable insights during the O&A session.

#### Importance of the Workshop:

The workshop played a pivotal role in enhancing the participants' understanding of NLP and Text Analytics. Dr. Kavitha's expertise and engaging presentation style made complex concepts accessible to all attendees. The hands-on exercises fostered a practical understanding, and the interactive session allowed for a deeper exploration of specific topics.

#### Feedback and Future Directions:

The feedback from participants was overwhelmingly positive, with many expressing a keen interest in further exploring NLP. Suggestions for future workshops included advanced topics in NLP, more hands-on sessions, and opportunities for collaborative projects.

#### Conclusion:





Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

The one-day technical workshop on Text Analytics and Natural Language Processing, led by Dr. Kavitha Karimbi Mahesh, was a resounding success. It not only provided participants with a solid foundation in NLP but also ignited a passion for further exploration in this dynamic field. The event, enriched by Dr. Kavitha's expertise, marked a significant step in empowering students with the knowledge and skills needed to navigate the evolving landscape of text analytics and natural language processing.





(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi. Recognized by Government of Karnataka.

#### Accredited by NAAC with A+ Grade

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

#### Department of Computer Science and Engineering (Accredited by NBA)

# Workshop On Open-Source Tools

Date: 07/12/2023, 08/12/2023, 11/12/2023

Location: DS LAB

Target Audience: Basic of Linux, LinkedIn and GitHub

### Report of Day 1

#### BASIC OF LINUX

This workshop was conducted on 07/12/2023 for the 3<sup>rd</sup> sem A section students by the C-Maniax aim if the of the workshop to provided an introduction to the basics of Linux, demystifying its core concepts and equipping participants with fundamental skills to navigate and interact with this popular open-source operating system.

#### **Topics Covered:**

- What is Linux? Unveiling the Linux family, its history, and key characteristics.
- Linux Distributions: Exploring popular distributions like Ubuntu, Fedora, and Debian, highlighting their strengths and differences.
- Graphical User Interface (GUI): Navigating the desktop environment, launching applications, and managing files and folders.
- Command Line Interface (CLI): Introduction to the terminal, basic commands for navigating the file system, manipulating files, and managing processes.
- File System Structure: Understanding the directory tree structure, permissions, and accessing files.
- Essential Commands: Learning fundamental commands for listing files, copying and moving data, checking system information, and managing users.
- Scripting for Automation: A brief introduction to shell scripting for automating repetitive tasks.
- Additional Resources: Recommending online resources and tutorials for further learning.

#### **Activities:**

- Hands-on exercises: Participants practiced navigating the GUI and CLI through guided tasks and challenges.
- Interactive Q&A session: Facilitate open discussion and address participant queries throughout the workshop.
- Optional post-workshop activity: Suggest individual exploration of chosen distribution for continued learning.





#### **Outcomes:**

- Participants gained a practical understanding of basic Linux concepts and functionalities.
- Attendees learned essential commands for navigating the file system and managing files.

- Participants built confidence using the command line interface for basic tasks.
- The workshop stimulated interest in further exploration of Linux for personal and professional use.

#### **Next Steps:**

- Encourage participants to explore the recommended resources and continue practicing their skills.
- Offer follow-up sessions or advanced workshops to delve deeper into specific Linux topics.
- Gather feedback from participants to improve future workshops.

Overall, the workshop successfully introduced participants to the fundamentals of Linux, promoting its accessibility and versatility. The hands-on approach and interactive environment fostered a positive learning experience and ignited curiosity for further exploration of this powerful operating system.

#### BASIC OF LINKEDIN

This topic was taken to give basic of linedin for empowered participants to unlock the full potential of LinkedIn, the world's largest professional network. We equipped them with essential strategies and tactics to build a powerful online presence, connect with key people, and leverage LinkedIn for career advancement or business growth.

#### **Topics Covered:**

- The Power of LinkedIn: Exploring the platform's benefits for individual and professional development.
- Crafting a Compelling Profile: Optimizing profile sections like headline, summary, experience, and skills to showcase your value proposition.
- Networking Strategies: Understanding effective connection building techniques, joining relevant groups, and engaging with industry voices.
- Content Marketing on LinkedIn: Sharing valuable insights and expertise through engaging posts, articles, and videos to become a thought leader.
- Job Search Strategies: Utilizing LinkedIn's advanced search tools, crafting winning job applications, and leveraging networking for hidden opportunities.
- Leveraging LinkedIn for Business: Implementing strategies for lead generation, brand building, and connecting with potential clients or partners.

• Advanced Tips & Tricks: Unveiling lesser-known features and hacks to maximize your LinkedIn experience.

#### **Activities:**

- Profile Makeover Session: Participants received personalized feedback and guidance on improving their LinkedIn profiles.
- Networking Simulation: Interactive exercises on breaking the ice, engaging in meaningful conversations, and building impactful connections.
- Content Creation Workshop: Brainstorming engaging content ideas and practicing effective article writing for LinkedIn.
- Mock Job Interviews: Guided practice sessions for crafting a compelling cover letter and excelling in virtual interviews.

#### **Outcomes:**

- Participants gained a comprehensive understanding of LinkedIn's functionalities and its potential for their personal and professional goals.
- They learned how to optimize their profiles and leverage strategies for effective networking and job search.
- Attendees developed skills for content creation and utilizing LinkedIn as a platform for thought leadership and brand building.
- The workshop inspired confidence and equipped participants with actionable strategies to make the most of their LinkedIn presence.

#### Next Steps:

- Encourage participants to implement the learned strategies and actively engage on LinkedIn.
- Offer follow-up resources and support, including Q&A sessions or webinars.
- Consider conducting advanced workshops covering specific topics like LinkedIn Sales Navigator or content marketing strategies.

Overall, the workshop proved insightful and empowering, equipping participants with the tools and knowledge to succeed on LinkedIn. By fostering a hands-on and interactive environment, the workshop fueled an understanding of this powerful platform's potential for career advancement, business growth, and professional networking.

#### BASIC OF GITHUB

This workshop unveiled the wonders of Git and GitHub, empowering participants with the foundational knowledge and skills to navigate this powerful version control platform. We demystified key concepts like version control, repositories, branches, and collaboration, equipping participants to manage their projects effectively and collaborate seamlessly with others.

#### **Topics Covered:**

- Version Control Demystified: Understanding the benefits and importance of version control for managing project changes.
- Introducing Git: Exploring the fundamentals of Git, its core commands, and working directory structure.
- Meet GitHub: Unveiling the functionalities of GitHub as a web-based platform for hosting Git repositories and collaboration.
- Creating Your First Repository: Stepping into the world of GitHub by setting up a new repository and understanding its components.
- Versioning with Git: Mastering basic Git commands for adding, tracking, committing, and reverting changes to your project files.
- Branching Out: Exploring the power of branching to experiment with different versions of your project without affecting the main codebase.
- Collaboration through Pull Requests: Learning how to share your changes with others and merge them seamlessly into the main branch using pull requests.
- Troubleshooting Common Issues: Demystifying common Git errors and providing guidance on resolving them effectively.

#### **Activities:**

- Hands-on Exercises: Participants practiced Git commands and GitHub workflows through interactive exercises, solidifying their understanding through practical application.
- Live Demo: Facilitator showcased common Git and GitHub actions during a live demonstration, providing visual cues to complement theoretical explanations.
- Q&A Session: An open forum for participants to ask questions, clarify doubts, and gain deeper insights into specific aspects of Git and GitHub.

#### **Outcomes:**

- Participants gained a solid understanding of Git and GitHub's core concepts and functionalities.
- They learned essential Git commands for versioning, branching, and collaborating on projects.
- Attendees developed confidence in working with Git and GitHub to manage their code effectively.
- The workshop sparked an interest in further exploring Git and GitHub's advanced features for more complex projects.

#### **Next Steps:**

- Encourage participants to practice their newly acquired skills on personal projects or collaborate with others on GitHub.
- Recommend online resources and tutorials for further learning and exploring advanced Git and GitHub features.
- Offer follow-up support and Q&A sessions to address any challenges participants may encounter.

Overall, the workshop successfully demystified Git and GitHub, providing participants with a strong foundation for version control and collaboration. The interactive format and hands-on exercises fueled understanding and fostered confidence in utilizing these powerful tools to manage and share their projects effectively.

#### REPORT OF DAY 2

#### **BASIC OF LINUX**

This workshop was conducted on **08/12/2023** for the **3<sup>rd</sup> sem B section** students by the **C-Maniax** aim if the of the workshop to provided an introduction to the basics of Linux, demystifying its core concepts and equipping participants with fundamental skills to navigate and interact with this popular open-source operating system.

#### **Topics Covered:**

- What is Linux? Unveiling the Linux family, its history, and key characteristics.
- Linux Distributions: Exploring popular distributions like Ubuntu, Fedora, and Debian, highlighting their strengths and differences.
- Graphical User Interface (GUI): Navigating the desktop environment, launching applications, and managing files and folders.
- Command Line Interface (CLI): Introduction to the terminal, basic commands for navigating the file system, manipulating files, and managing processes.
- File System Structure: Understanding the directory tree structure, permissions, and accessing files.
- Essential Commands: Learning fundamental commands for listing files, copying and moving data, checking system information, and managing users.
- Scripting for Automation: A brief introduction to shell scripting for automating repetitive tasks.
- Additional Resources: Recommending online resources and tutorials for further learning.

#### **Activities:**

- Hands-on exercises: Participants practiced navigating the GUI and CLI through guided tasks and challenges.
- Interactive Q&A session: Facilitate open discussion and address participant queries throughout the workshop.
- Optional post-workshop activity: Suggest individual exploration of chosen distribution for continued learning.





#### **Outcomes:**

- Participants gained a practical understanding of basic Linux concepts and functionalities.
- Attendees learned essential commands for navigating the file system and managing files.
- Participants built confidence using the command line interface for basic tasks.
- The workshop stimulated interest in further exploration of Linux for personal and professional use.

### **Next Steps:**

- Encourage participants to explore the recommended resources and continue practicing their skills.
- Offer follow-up sessions or advanced workshops to delve deeper into specific Linux topics.
- Gather feedback from participants to improve future workshops.

Overall, the workshop successfully introduced participants to the fundamentals of Linux, promoting its accessibility and versatility. The hands-on approach and interactive environment fostered a positive learning experience and ignited curiosity for further exploration of this powerful operating system.

#### BASIC OF LINKEDIN

This topic was taken to give basic of linedin for empowered participants to unlock the full potential of LinkedIn, the world's largest professional network. We equipped them with essential strategies and tactics to build a powerful online presence, connect with key people, and leverage LinkedIn for career advancement or business growth.

#### **Topics Covered:**

- The Power of LinkedIn: Exploring the platform's benefits for individual and professional development.
- Crafting a Compelling Profile: Optimizing profile sections like headline, summary, experience, and skills to showcase your value proposition.
- Networking Strategies: Understanding effective connection building techniques, joining relevant groups, and engaging with industry voices.
- Content Marketing on LinkedIn: Sharing valuable insights and expertise through engaging posts, articles, and videos to become a thought leader.
- Job Search Strategies: Utilizing LinkedIn's advanced search tools, crafting winning job applications, and leveraging networking for hidden opportunities.
- Leveraging LinkedIn for Business: Implementing strategies for lead generation, brand building, and connecting with potential clients or partners.
- Advanced Tips & Tricks: Unveiling lesser-known features and hacks to maximize your LinkedIn experience.

#### **Activities:**

 Profile Makeover Session: Participants received personalized feedback and guidance on improving their LinkedIn profiles.

- Networking Simulation: Interactive exercises on breaking the ice, engaging in meaningful conversations, and building impactful connections.
- Content Creation Workshop: Brainstorming engaging content ideas and practicing effective article writing for LinkedIn.
- Mock Job Interviews: Guided practice sessions for crafting a compelling cover letter and excelling in virtual interviews.

#### **Outcomes:**

- Participants gained a comprehensive understanding of LinkedIn's functionalities and its potential for their personal and professional goals.
- They learned how to optimize their profiles and leverage strategies for effective networking and job search.
- Attendees developed skills for content creation and utilizing LinkedIn as a platform for thought leadership and brand building.
- The workshop inspired confidence and equipped participants with actionable strategies to make the most of their LinkedIn presence.

#### Next Steps:

- Encourage participants to implement the learned strategies and actively engage on LinkedIn.
- Offer follow-up resources and support, including Q&A sessions or webinars.
- Consider conducting advanced workshops covering specific topics like LinkedIn Sales Navigator or content marketing strategies.

Overall, the workshop proved insightful and empowering, equipping participants with the tools and knowledge to succeed on LinkedIn. By fostering a hands-on and interactive environment, the workshop fueled an understanding of this powerful platform's potential for career advancement, business growth, and professional networking.

#### BASIC OF GITHUB

This workshop unveiled the wonders of Git and GitHub, empowering participants with the foundational knowledge and skills to navigate this powerful version control platform. We demystified key concepts like version control, repositories, branches, and collaboration, equipping participants to manage their projects effectively and collaborate seamlessly with others.

#### **Topics Covered:**

- Version Control Demystified: Understanding the benefits and importance of version control for managing project changes.
- Introducing Git: Exploring the fundamentals of Git, its core commands, and working directory structure.
- Meet GitHub: Unveiling the functionalities of GitHub as a web-based platform for hosting Git repositories and collaboration.
- Creating Your First Repository: Stepping into the world of GitHub by setting up a new repository and understanding its components.
- Versioning with Git: Mastering basic Git commands for adding, tracking, committing, and reverting changes to your project files.
- Branching Out: Exploring the power of branching to experiment with different versions of your project without affecting the main codebase.
- Collaboration through Pull Requests: Learning how to share your changes with others and merge them seamlessly into the main branch using pull requests.
- Troubleshooting Common Issues: Demystifying common Git errors and providing guidance on resolving them effectively.

#### **Activities:**

- Hands-on Exercises: Participants practiced Git commands and GitHub workflows through interactive exercises, solidifying their understanding through practical application.
- Live Demo: Facilitator showcased common Git and GitHub actions during a live demonstration, providing visual cues to complement theoretical explanations.
- Q&A Session: An open forum for participants to ask questions, clarify doubts, and gain deeper insights into specific aspects of Git and GitHub.

#### **Outcomes:**

- Participants gained a solid understanding of Git and GitHub's core concepts and functionalities.
- They learned essential Git commands for versioning, branching, and collaborating on projects.
- Attendees developed confidence in working with Git and GitHub to manage their code effectively.

• The workshop sparked an interest in further exploring Git and GitHub's advanced features for more complex projects.

### **Next Steps:**

- Encourage participants to practice their newly acquired skills on personal projects or collaborate with others on GitHub.
- Recommend online resources and tutorials for further learning and exploring advanced Git and GitHub features.
- Offer follow-up support and Q&A sessions to address any challenges participants may encounter.

Overall, the workshop successfully demystified Git and GitHub, providing participants with a strong foundation for version control and collaboration. The interactive format and hands-on exercises fueled understanding and fostered confidence in utilizing these powerful tools to manage and share their projects effectively.

# Report of Day 3

#### **BASIC OF LINUX**

This workshop was conducted on 11/12/2023 for the 3<sup>rd</sup> sem C section students by the C-Maniax aim if the of the workshop to provided an introduction to the basics of Linux, demystifying its core concepts and equipping participants with fundamental skills to navigate and interact with this popular open-source operating system.

#### **Topics Covered:**

- What is Linux? Unveiling the Linux family, its history, and key characteristics.
- Linux Distributions: Exploring popular distributions like Ubuntu, Fedora, and Debian, highlighting their strengths and differences.
- Graphical User Interface (GUI): Navigating the desktop environment, launching applications, and managing files and folders.
- Command Line Interface (CLI): Introduction to the terminal, basic commands for navigating the file system, manipulating files, and managing processes.
- File System Structure: Understanding the directory tree structure, permissions, and accessing files.
- Essential Commands: Learning fundamental commands for listing files, copying and moving data, checking system information, and managing users.
- Scripting for Automation: A brief introduction to shell scripting for automating repetitive tasks.
- Additional Resources: Recommending online resources and tutorials for further learning.

#### **Activities:**

- Hands-on exercises: Participants practiced navigating the GUI and CLI through guided tasks and challenges.
- Interactive Q&A session: Facilitate open discussion and address participant queries throughout the workshop.
- Optional post-workshop activity: Suggest individual exploration of chosen distribution for continued learning.





#### **Outcomes:**

- Participants gained a practical understanding of basic Linux concepts and functionalities.
- Attendees learned essential commands for navigating the file system and managing files.
- Participants built confidence using the command line interface for basic tasks.
- The workshop stimulated interest in further exploration of Linux for personal and professional use.

#### **Next Steps:**

- Encourage participants to explore the recommended resources and continue practicing their skills.
- Offer follow-up sessions or advanced workshops to delve deeper into specific Linux topics.
- Gather feedback from participants to improve future workshops.

Overall, the workshop successfully introduced participants to the fundamentals of Linux, promoting its accessibility and versatility. The hands-on approach and interactive environment fostered a positive learning experience and ignited curiosity for further exploration of this powerful operating system.

#### BASIC OF LINKEDIN

This topic was taken to give basic of linedin for empowered participants to unlock the full potential of LinkedIn, the world's largest professional network. We equipped them with essential strategies and tactics to build a powerful online presence, connect with key people, and leverage LinkedIn for career advancement or business growth.

### **Topics Covered:**

- The Power of LinkedIn: Exploring the platform's benefits for individual and professional development.
- Crafting a Compelling Profile: Optimizing profile sections like headline, summary, experience, and skills to showcase your value proposition.
- Networking Strategies: Understanding effective connection building techniques, joining relevant groups, and engaging with industry voices.
- Content Marketing on LinkedIn: Sharing valuable insights and expertise through engaging posts, articles, and videos to become a thought leader.
- Job Search Strategies: Utilizing LinkedIn's advanced search tools, crafting winning job applications, and leveraging networking for hidden opportunities.
- Leveraging LinkedIn for Business: Implementing strategies for lead generation, brand building, and connecting with potential clients or partners.
- Advanced Tips & Tricks: Unveiling lesser-known features and hacks to maximize your LinkedIn experience.

#### **Activities:**

- Profile Makeover Session: Participants received personalized feedback and guidance on improving their LinkedIn profiles.
- Networking Simulation: Interactive exercises on breaking the ice, engaging in meaningful conversations, and building impactful connections.
- Content Creation Workshop: Brainstorming engaging content ideas and practicing effective article writing for LinkedIn.
- Mock Job Interviews: Guided practice sessions for crafting a compelling cover letter and excelling in virtual interviews.

#### **Outcomes:**

- Participants gained a comprehensive understanding of LinkedIn's functionalities and its potential for their personal and professional goals.
- They learned how to optimize their profiles and leverage strategies for effective networking and job search.
- Attendees developed skills for content creation and utilizing LinkedIn as a platform for thought leadership and brand building.
- The workshop inspired confidence and equipped participants with actionable strategies to make the most of their LinkedIn presence.

#### Next Steps:

- Encourage participants to implement the learned strategies and actively engage on LinkedIn.
- Offer follow-up resources and support, including Q&A sessions or webinars.
- Consider conducting advanced workshops covering specific topics like LinkedIn Sales Navigator or content marketing strategies.

Overall, the workshop proved insightful and empowering, equipping participants with the tools and knowledge to succeed on LinkedIn. By fostering a hands-on and interactive environment, the workshop fueled an understanding of this powerful platform's potential for career advancement, business growth, and professional networking.

#### BASIC OF GITHUB

This workshop unveiled the wonders of Git and GitHub, empowering participants with the foundational knowledge and skills to navigate this powerful version control platform. We demystified key concepts like version control, repositories, branches, and collaboration, equipping participants to manage their projects effectively and collaborate seamlessly with others.

#### **Topics Covered:**

- Version Control Demystified: Understanding the benefits and importance of version control for managing project changes.
- Introducing Git: Exploring the fundamentals of Git, its core commands, and working directory structure.
- Meet GitHub: Unveiling the functionalities of GitHub as a web-based platform for hosting Git repositories and collaboration.
- Creating Your First Repository: Stepping into the world of GitHub by setting up a new repository and understanding its components.
- Versioning with Git: Mastering basic Git commands for adding, tracking, committing, and reverting changes to your project files.
- Branching Out: Exploring the power of branching to experiment with different versions of your project without affecting the main codebase.
- Collaboration through Pull Requests: Learning how to share your changes with others and merge them seamlessly into the main branch using pull requests.
- Troubleshooting Common Issues: Demystifying common Git errors and providing guidance on resolving them effectively.

#### **Activities:**

- Hands-on Exercises: Participants practiced Git commands and GitHub workflows through interactive exercises, solidifying their understanding through practical application.
- Live Demo: Facilitator showcased common Git and GitHub actions during a live demonstration, providing visual cues to complement theoretical explanations.
- Q&A Session: An open forum for participants to ask questions, clarify doubts, and gain deeper insights into specific aspects of Git and GitHub.

#### **Outcomes:**

- Participants gained a solid understanding of Git and GitHub's core concepts and functionalities.
- They learned essential Git commands for versioning, branching, and collaborating on projects.
- Attendees developed confidence in working with Git and GitHub to manage their code effectively.
- The workshop sparked an interest in further exploring Git and GitHub's advanced features for more complex projects.

#### **Next Steps:**

- Encourage participants to practice their newly acquired skills on personal projects or collaborate with others on GitHub.
- Recommend online resources and tutorials for further learning and exploring advanced Git and GitHub features.
- Offer follow-up support and Q&A sessions to address any challenges participants may encounter.

Overall, the workshop successfully demystified Git and GitHub, providing participants with a strong foundation for version control and collaboration. The interactive format and hands-on exercises fueled understanding and fostered confidence in utilizing these powerful tools to manage and share their projects effectively.



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

# **Technical Workshop Report:**

# POWER OF GENERATIVE AI IN SOFTWARE DEVELOPMENT LIFE CYCLE



Date: 26th December 2023, 10:00AM TO 4:00 PM

**Venue: DBMS LAB** 

#### Introduction:

The one-day technical workshop on the "Power of Generative AI in Software Development Life Cycle" was held on December 26, 2023. The workshop featured Mr. Krishnaraja Hejamadi, Director at KPMG, Bangalore, as the distinguished speaker. The event aimed to shed light on the transformative role of Generative AI in various phases of the Software Development Life Cycle



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

(SDLC). The workshop covered a diverse range of topics, providing participants with a comprehensive understanding of Generative AI and its applications in software development. The agenda included:



### **Features and Uses of New GEN AI:**

Mr. Krishnaraja began by discussing the features and applications of New Generation AI, emphasizing its significance in driving innovation and efficiency in software development processes.

### **AI Terminologies / Models:**

The workshop delved into key AI terminologies and models, including Data Mining, Machine Learning (ML), Natural Language Processing (NLP), Predictive Analysis, and Sentiment Analysis. Participants gained insights into the broader AI landscape.



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

### Working of Generative AI with Block Diagram:

A detailed explanation of the working of Generative AI with a block diagram was presented, providing participants with a visual representation of the underlying processes.

## **Generative AI Images:**

Mr. Krishnaraja showcased the capabilities of Generative AI in generating images, illustrating its potential in creative applications within the software development domain.

#### **Hands-On Tools and Platforms:**

Participants were actively engaged in hands-on activities using AI tools such as Image Generator and Text Generator available in Deep AI. Mr. Krishnaraja guided students through practical exercises to reinforce their understanding.

#### **Overview of Generative AI Tools/Platforms:**

The speaker provided an overview of various Generative AI tools and platforms, including OpenAI Alphabet, OpenAI Stability.ai, Cohere, Jasper, Krisp, Pictory, Tabnine, and more. This session allowed participants to explore the vast landscape of available tools.

### **Comprehensive Expectations for Generative AI Applications:**

Mr. Krishnaraja discussed a comprehensive list of expectations for Generative AI applications, considering both sector-specific and functional requirements.

#### **Chat GPT in SDLC:**

The workshop included a detailed discussion on Chat GPT (Generative Pretrained Transformer) and its role in the Software Development Life Cycle. Mr. Krishnaraja provided practical examples of integrating Chat GPT into different phases of SDLC.

#### **Data Acquisition and Interactive Sessions:**



Shobhavana Campus, Mijar, Moodbidri, D.K - 574225 Phone: 08258-262725, Fax: 08258-262726

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

(Accredited by NBA, New Delhi 2019-2022)

A segment on data acquisition was covered, and interactive sessions allowed participants to pose questions and seek clarifications on various aspects of Generative AI and its applications in SDLC.

#### Importance of the Workshop:

The workshop proved to be a valuable experience for participants, as it offered a holistic view of Generative AI's potential in the Software Development Life Cycle. Mr. Krishnaraja's expertise and engaging presentation style facilitated a clear understanding of complex concepts, making the workshop accessible to participants with varying levels of expertise.

#### Feedback and Future Directions:

Participants expressed their appreciation for the workshop's content, practical exercises, and the opportunity to interact directly with an industry expert. Suggestions for future workshops included more hands-on sessions, in-depth case studies, and exploration of emerging trends in Generative AI.

#### Conclusion:

The one-day technical workshop on the "Power of Generative AI in Software Development Life Cycle" was a resounding success, providing participants with valuable insights into the application of Generative AI in the software development domain. The event not only enhanced their understanding of the technology but also inspired them to explore innovative ways to integrate Generative AI into their future projects.