

# **VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama” Belagavi – 590 010**



## **PROJECT REPORT ON**

### **“Estimation of Horizontal and Vertical Position of GNSS antenna”**

**Submitted in partial fulfillment of the requirements for the award of degree**

#### **BACHELOR OF ENGINEERING IN**

#### **ELECTRONICS & COMMUNICATION ENGINEERING**

#### **Submitted By**

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**Under the Guidance of**  
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**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**  
**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOODBIDRI – 574 225.**

**2017-2018**

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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(Affiliated to VTU, BELAGAVI)

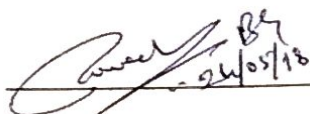
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## CERTIFICATE

Certified that the project work entitled “ESTIMATION OF HORIZONTAL AND VERTICAL POSITION OF GNSS ANTENNA” is a bonafide work carried out by

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2017-2018. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering degree.



Signature of the Guide

Mr. Parveez Shariff B G



Signature of the H.O.D  
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## ABSTRACT

In this project, some of the ideas of positioning using GPS are explored, GPS is a satellite-based navigation system made up of a network of 24 satellites placed into orbit by the U.S department of defense. It provides the use of a handheld GPS receiver in the areas of precise positioning, mapping locations, navigating across the mapped locations.

This project is to estimate the horizontal and vertical position of GNSS receiver antenna using observation file and navigation file which are extracted from the receiver system. The GNSS is a satellite route framework for deciding position, speed and time with high exactness by the procedure of trilateration. The receiver independent exchange format file is utilized to extract the parameters from GPS route information document. These parameters are implemented in the formulas using MATLAB software, the cartesian coordinates of GPS receiver are obtained and they are plotted individually in 2 dimension.