



**NAYAK PREMPRAKASH | 16CE10032**

**CIVIL ENGG. (B.Tech 4Y)**

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## EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2020	B.TECH	IIT Kharagpur	6.19 / 10
2015	XII(Gujarat Board)	Shree Gattu Vidyalaya	79%
2013	X(Gujarat Board)	Shree Gattu Vidyalaya	86%

## SKILLS AND EXPERTISE

- **Relevant Coursework:** Programming And Data Structure | Probability and Statistics | Algorithm | Linear And Matrix Algebra | Machine Learning | Soft Computing Tools in Engineering | Basic Electronics | Transform Calculus
- **Programming Languages & Technologies:** C++ | Python | Java | JAVASCRIPT | PHP | SQL
- **Technical Softwares:** MATLAB | Jupyter Notebook | Microsoft Office | Excel-VBA, AutoCAD

## TEACHING EXPERIENCE

**Mathematics Tutor| Aryabhatta Academy ,Ankleshwar**

**March 2021 – Current**

- Founded own coaching for 11<sup>th</sup> and 12<sup>th</sup> Board and JEE preparations.
- I was Mathematics faculty for both 11<sup>th</sup> and 12<sup>th</sup> , Have depth knowledge of topics related to Calculus ,Vector 3D , Algebra and Conic sections.
- Managed and coordinated exam paper preparation, conduction of mock tests ,Continuous evaluations and personal interaction with students for continuous growth in their performance
- Have experience of taking both Offline as well as online classes.

**Mathematics Tutor| Virtual Academy ,Ankleshwar**

**July 2020 – September 2020**

- Conducted Many online and offline classes for 12<sup>th</sup> and 11<sup>th</sup> batch, Finished chapters like Functions and Graphs, Trigonometry , Differentiability and Continuity in 2 months.

## ACADEMIC ACHIEVEMENTS

- Ranked in top 1% among 1.86 lakhs appeared in IIT Joint Entrance Exam (JEE Advanced- 2016) **ALL INDIA RANK 7098 GENERAL.**
- Qualified JEE MAINS in 2016 **147 out of 360** , Highest marks in Mathematics , Qualified JEE Mains in 2015 **128 out of 360.**
- Qualified written examinations of Defence exams like NDA in 2016 , CDS in 2021 and 2022.

## PROFESSIONAL EXPERIENCE

**Consultant | Capgemini Technology Services India LTD**

**September 2020 - Current**

- **Discover Financial Services** : Worked with Discover Client on their Banking applications development and its deployment on OCP platforms.
- Created REST endpoints for many services related to paypal using Spring Boot , Java framework.
- Worked on Java Backend Applications , Database connections and performing various operations using Spring JPA and hibernate.



## INTERNSHIPS

### Internet Of Things And Machine Learning | Bolt IoT

June 2019 - July 2019

- **Temperature Monitoring System:** Built the circuit for temperature monitoring system, using the Bolt and LM35 sensor, Wrote a python code which will fetch the temperature data, every 10 seconds, these data were collected on **Bolt Cloud**.  
- Sends out an email alert, if the temperature goes beyond the threshold temperature, wrote Z-score analysis code in Python to detect anomalies in temperature and send message alert to users.
- **LED Control System:** Controlling Led brightness using API calls for **Bolt** and **Arduino**, used **PWM** (pulse width modulation) for controlling the intensity of LED from Bolt python Library.
- Worked on various other projects like Room light Intensity Monitoring system, Plant Monitoring System using **LDR**, Home Automation using Internet of Things and Machine learning, Analyzed data obtained from project which were stored on **Bolt cloud**.

### Oil and Natural Gas Corporation | Ankleshwar, Gujarat

May 2019 - July 2019

- Working under the mentorship of Mr. Rajendra Mane, Chief engineer (Civil) in Engineering Service division, ONGC Ankleshwar.
- Visited various working sites of **ONGC**, Jambusar, Gandhar, Dahej and got hands on experience of civil and foundation work of Oil rigs, also got exposure of their tendering work.
- Did Cost Estimation of Various Residential buildings and upcoming construction projects going on there and helped in maintenance work.
- Studied tender documents of the various published tenders and learnt the process and stages of accepting the tender, learnt the contractor aspect of construction projects.

## PROJECTS

### RESEARCH PROJECT | Lecture Notes Generator | CNN | NLP

Jan 2019 - April 2019

- Converted speech to text from video lectures by using deep neural networks to process those texts which can be summarized using weighted frequency of words.
- Processing of the figures and text in image obtained from data were done by using convolutional neural networks using Computer vision to include Important images and text in Overall summarization of notes.
- By natural language processing, processed the text obtained from video using NLTK and spacy library, Filtered important words from the text on the basis of weighted frequency of words after sentence tokenization of texts.
- Displayed these important points in the proper format so that it becomes easily understandable.

### Risk Assessment of Bridges using Fuzzy Logic control system | Guide: Prof. S.K. Barai

Jan 2019 - Feb 2019

- Designed a fuzzy controller for the risk assessment of bridges, Different type of bridge damage and collapse risk like Flood risk, Earthquake risk were taken as input and its membership functions were created.
- Using MATLAB, Created a Fuzzy logic control system, which can be used to predict damage level of different kind of bridges depending upon its vulnerability to different kind of risks.

## POSITIONS OF RESPONSIBILITY

### Core Organising Team Member | Megalith | Annual technical Fest of Civil Engineering, IIT Kharagpur

July 2017-April 2018

- Worked as 'Web team member' in Megalith 2018, responsible for the hosting, backend development of the website, formulation, planning and execution of the online registration of the participants
- Handled the database of all participants and analyse them to improve the publicity of the Fest and executed the **Publicity Campaign** in 60 colleges around 7 cities all over India and managed the crowd of 800 plus participants.

## EXTRA CURRICULAR ACTIVITIES

- **Group leader:** Led the unit members in annual NSS camp resulting in 50% improvement in unit's performance.
- Participated in Inter-Hall illumination competition thereby contributing significantly in inter-hall GC events.