

## SCHOLASTIC ACHIEVEMENTS

- **99.68** percentile in **GATE-2016** in Electronics and Communication among **1,52,318** candidates (2016)
- Secured All India rank of **7578** among **11.87 Lakh** students in **AIEEE** (2012)
- Was **3<sup>rd</sup>** runner up in **national level** abacus competition by SIP-INDIA (2008)

## MAJOR PROJECTS

- **M.Tech Project: OpenFlow Router with eBPF Forwarding Engine** (May'18 - Present)  
Guide: *Prof. D. Manjunath, Electrical Engineering, IIT Bombay*
  - The Goal is to use SDN framework, and create a fast forwarding engine.
  - The Forwarding Engine would be ported to a SPARC based FPGA, synthesised using AHIR tool
- **B.Tech Project: Obstacle Detection at Unmanned Railway Crossing Using Image Processing** (Jul'13 - Apr'14)  
Guide: *Prof. V. R. Satpute, Electronics & Communication Engineering, VNIT Nagpur*
  - Created own dataset for input.
  - Used basic image processing techniques, and morphological operations to extract moving obstacles at railway crossing

## WORK EXPERIENCE

- **Software Developer** | Nykaa (June'16 - July'17)
  - **Roles and Responsibilities:** Involved in development of Product listing, Search, and Checkout verticles of the website.
  - Closely worked with Marketing team to embed tracking tags at numerous locations within the website.
  - **Softwares used:** Magento framework, PHP, Javascript, jQuery, HTML
- **System Administrator** | PC Lab, Electrical Department, IIT Bombay (July'17 - Present)
  - Development of EE department website, Dashboard, and maintaining numerous portals like faculty search committee, meeting room booking system, faculty wiki pages and TA allotment portals.
  - Provide mail service, storage space, computing and network facilities to the Department.
  - **Automation** of admission process through web based services and **Bash Scripts**
- **Teaching Assistant: Communication Networks** | IIT Bombay, IIT Dharwad (Jan'19 - April'19)
  - Assisted Prof. D. Manjunath in creation and evaluation of Lab Experiments involving socket programming.
  - Work involved Traveling, Setting up Lab Experiments and evaluations at IIT Dharwad.

## KEY COURSE PROJECTS AND SEMINAR

- **Simulation of Cellular system in MATLAB** (Jan'18 - Apr'18)  
Instructor: *Prof. Abhay Karandikar, IIT Bombay*
  - Computed **SIR**, **blocking probability** for different cluster sizes and **sectoring**. Analyzed **handover** process and **ping-pong** rate for different user mobilities and hysteresis values.
  - Analyzed BER performance for **space and time diversity** in a slow, flat fading Rayleigh channel.
  - Analyzed BER performance for a **single-cell** and **multi-cell** scenario in a **CDMA** cellular system.

- **Different Scheduling Schemes in LTE** (Jan'18 - Apr'18)  
Instructor: *Prof. Abhay Karandikar, IIT Bombay*
  - Simulated channel aware schemes: Maximum Throughput, Proportional Fair, Throughput to Average scheduling schemes in LTE Downlink.
  - Used Cell Throughput, Average user throughput, and Jain Fairness Index as metrics to compare the scheduling schemes.
- **Image Dehazing through Depth estimation** (July'18 - Nov'18)  
Instructor: *Prof. Amit Sethi, IIT Bombay*
  - Estimated Depth of a scene, using Color Attenuation Prior and Dark Channel Prior.
  - Using the estimated depth, reconstructed a haze-free image based on atmosphere degradation model
- **Visualisation of DBSCAN Clustering Algorithm** (Jan'18 - Apr'18)  
Instructor: *Prof. Amit Sethi, IIT Bombay*
  - Implemented DBSCAN algorithm in python from scratch.
  - Utilised the implementation as a backend process for a web based GUI, which clusters data points and labels them, each cluster having a different hue.
- **Seminar: Open Source Router** (Jan'17 - Apr'17)  
Instructor: *Prof. D. Manjunath, IIT Bombay*
  - Understood SDN
  - Read about Click Modular Router, Extended Berkeley Packet Filter, Network Processor Architecture
  - Implemented Click Modular Router.

## KEY COURSE PROJECTS AND SEMINAR

**Languages** : C, C++, Bash Scripting, HTML, Javascript, jQuery, PHP, Python  
**Tools** : Matlab, GNU Radio, L<sup>A</sup>T<sub>E</sub>X, Git  
**Frameworks** : Magento, CodeIgniter

## RELEVANT COURSES

- Digital Message Transmission
- DSP and its Applications
- Introduction to Machine Learning
- Wireless and Mobile Communications
- Image Processing
- Applied Linear Algebra
- Information Theory and Coding
- Statistical Signal Analysis
- Communication Networks

## POSITIONS OF RESPONSIBILITY

- **Web Secretary: Hostel 1, IIT Bombay** (Jul'17 - Jun'18)
  - Development and Maintenance of Hostel 1 Web site, and Computers.
- **Student Companion: Institute Student Companion Program, IIT Bombay** (Jul'18 - Jun'19)
  - **Mentored** 7 new entrants and ensured their smooth transition into the curriculum of institution.
  - Helped them in institute activities, course selection, technical and non-technical development.
- **PG Bridge Course Overall Coordinator: Electrical Department IIT Bombay** (Jul'18)
  - Organised a week long program for the **academic upliftment** of PG freshers.
  - Executed the program effectively in **parallel to regular academics** for more than **100** students.
- **Web Coordinator - PGAC IIT Bombay** (Jul'18 - Jun'19)
- **Web Coordinator - Student Reading Group Electrical Department IITB** (Jul'18 - Jun'19)

## OTHER ACTIVITIES & INTERESTS

- **Volunteered** for Python Workshop by PGAC IIT Bombay (Oct'18)
- **Volunteered** for Linux Workshop for Electrical Department PG Bridgecourse, IIT Bombay (Oct'18)
- **Hobbies:** Watching TV series, solving puzzles, chess, snooker