

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 **3rd** 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^AT_EX, 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