M ARUN KUMAR 173079004
Electrical Engineering **M.Tech.**
Indian Institute of Technology Bombay **Male**
Specialization: Communication Engineering **DOB: 29-04-1994**

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2020	0.00
Undergraduate Specialization : Electronics & Communication Engineering				
Graduation	JNTUH	Aurora's Technological and Research Institute	2015	74.08

MAJOR PROJECT

- **M.Tech Project: An efficient channel estimation scheme in TDD MIMO Systems** (*May'19 - Present*)
  Guide: *Prof. Kumar Appaiah, Electrical Engineering, IIT Bombay*
    - Implemented **Multi Cell MMSE based MIMO precoding** in mulitple antennas systems which used non-orthogonal pilots for channel estimation.
    - Analysed and implemented **covariance based channel estimation** which uses Bayesian Estimation in single cell system and observed its performance based on rate vs number of antennas.
    - Working on implemention a basic precoder which utilises the information obtained from **Kalman** estimate in **coordinated MIMO** systems.

WORK EXPERIENCE & NON ACADEMIC PROJECT

- **Interview Management Software | Electrical Engineering Department, IITB** (*Feb'18 - present*)
  Guide: *Prof. Bikash kumar Dey, Prof. Madhu N Belur, Electrical Engineering, IIT Bombay*
    - **Lead role** in building online system that made **automatic coordination** across interview committees.
    - Online system allowed committees to decide in **real-time** using a **cross platform web application** about interviews.
    - Built various other **peripheral interfaces** to collect data at different times from students and other sources.
    - This system was used **successfully** in the last **3** admission sessions.
- **Systems Engineer | Infosys Technology Ltd** (*Dec'15 - Jul'17*)
    - **Roles and responsibilities:** part of the team which developed an application which automates billing for the customers of the client.
    - Wrote SQL queries to fetch data to the module and to develop features using Oracle Peoplesoft ERM tool.

KEY COURSE PROJECTS AND SEMINAR

- Scheduling in 4G LTE (*Jan'18 - Apr'18*)
- Simulation of Cellular System in Octave (*Jan'18 - Apr'18*)
- Inter cell interference in Multi Cell MIMO systems [**M.Tech Seminar**] (*Jul'18 - Nov'18*)
- Image Dehazing using color attenuation prior and dark channel prior (*Jul'18 - Nov'18*)
- Basic Image Editor tool in Python (*Jul'18 - Nov'18*)
- Wavelet based leaders and P leaders in Multi Fractal Analysis (*Jul'18 - Nov'18*)
- Spam URL classification using Machine Learning (*Jan'19 - Apr'19*)

TECHNICAL SKILLS

Languages	:	C, C++, Python, Bash scripting, HTML, PHP
Tools	:	Matlab/Octave, LaTeX, Git.

POSITIONS OF RESPONSIBILITY

- **System Administrator: PC Lab, Electrical Department, IIT Bombay** (*Jul'17 - Present*)
    - Building and maintaining website of EE department, maintaining TA feedback and allotment portals.
    - Provide mail service, storage space, computing facilities and network facilities to department.
- **Web Nominee: Post Graduate Academic Council, IIT Bombay** (*Jul'18 - Jun'19*)
    - Designed new web portal for PGAC which is used by all the Post Graduate students of the institute.
- **Mess Secretary: Hostel-1, IIT Bombay** (*Sep'17 - Mar'18*)
    - Managed all mess related activites for a mess which catered for 250+ students.

CO & EXTRA CURRICULAR ACTIVITIES

- Completed **Machine Learning** course by **Andrew Ng** from Coursera. (*2019*)
- Conducted a introductory session on **Linux, vim and Git** as a part of Bridge Course. (*2019*)
- Volunteered for an introductory session on **Python** which was conducted as a part of Bridge Course. (*2019*)
- Completed a **100 hrs** course on **Chinese** language conducted by International Relations office IIT Bombay. (*2019*)
- Completed Basic course in **French** Language from Vivekananda Institute of Languages, Hyderabad. (*2013*)
- Active member of **National Service Scheme (NSS)** for 2 years and attended a camp conducted in a village to perform social activites like conducting medical camps, cleaning and painting common facilites like village panchayat, temple etc. (*2013*)
- Volunteered for 1st **World Parliament on Spirituality** for a week as part of NSS activity. (*2012*)