RAHUL JAIN

ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks (%)
---	B. Tech in Electrical Engineering	Indian Institute of Technology, Delhi	9.332
2017	CBSE	Maharishi Vidya Mandir, Jabalpur	92.4/100
2015	CBSE	Tara Convent School, Malerkotla	10/10

SCHOLASTIC ACHIEVEMENTS

- **JEE Advance:** Secured A.I.R 304 **JEE Mains:** Secured A.I.R 292 among 1.5 million aspirants
- **IITD Semester Merit Award:** IITD Semester Merit Award for being in top-7% in 3 semesters consecutively
- **KVPY:** Qualified for Research Fellowship by Department of Science and Technology in 2016 and 2017
- **National Science Examination, Physics**: Awarded Merit certificate for being top 1% in state.

RELEVENT COURSES

Advance Machine Learning, Computer Vision, Computer Architecture, Operating Systems, Database Management System, Data Structures and Algorithms, Probability and Stochastic Processes, Signals and Systems, Analog Circuits, Control Engineering, Communication Engineering, Macro Economics, Micro Economics, Linear Algebra, Calculus

INTERNSHIPS

- **Microsoft Development Center, Bangalore** (May, 20 – July, 20*) Advance Level Root Cause Analysis:*
  - Designed a heuristic algorithm to identify the root cause of the anomalies in Key Performance Indicators in BingAds data
  - Reduced the duration of fault identification from 2-3 hours to 10 min; Algorithm to be used in production by AdMAD team
- **NVM and Neuromorphic Research Group (Supervisor: Prof. Manan Suri)** (May, 2019 - July, 2019):
  Development of module for Semiconductor Characterization Test Setup
  - Developed a program to synchronize Keithley parameter analyzer with external electronic peripherals using KXCI & KITE
  - Created Virtual Instruments in LabView for interfacing with hardware devices Arduino, External DAC etc.
  - Deployed an End-to-End solution based on PyQt5-tools, Flask server and MySQL Database for storing and sharing of data
- **Torch Investment, Noida** (Feb, 20 – April, 20*) Stock Prediction through Machine learning*:
  - Develop a machine learning model to predict the top performing stocks of the next year based on current stock prices and indexes.
  - Creating a portfolio from Top S&P 500 Stocks which maximizes the total annual returns on the fund.
- **Docri, New Delhi** (May, 2018 - July, 2018): *DOCRI Web Application:*
  - Developed a real-time collaboration and document authoring tool with unique information collection tools
  - Worked on Phoenix & Reacts Framework; Designed algorithms to sort hyperlink meta-data to improve user experience

PROJECTS

- **Hand Gesture Recognition (Prof. Chetan Arora)** *(Oct, 19 – Nov, 19)*
  - Developed a multi-class classification Convolutional Net model using PyTorch for classification of certain hand gestures
  - Created and Augmented the Data set and achieved results on video stream.
- **Decision Support System (Prof. Nomesh Bolia)** *(March, 20 – May, 20)*
  - Developed an ERP system to create and organize meetings/events of the government officials.
  - Provide features such as sharing of MOMs, notes, information, notifications on schemes, law and order, and policy related matters.
- **Career Counselling Through Machine Learning (Prof. Saurabh Paul)** *(Dec, 18 – Sept, 19)*
  - Development of models for classification and rating of different user profile for a career
  - Created a Skill-vs-Skill, Skill-vs-Career Matrix from web-scraped data using Natural Language Processing tools
- **Posture Enhancing Device (Prof. Saakshi Dhanekar)** *(Sept,18 - Oct,18)*
  - Prototyped a posture enhancing device using Arduino, MYOSA Accelerators, Gyroscope and Bluetooth HC-05 Modules
  - Developed an android application to track user's posture status and alert user on detecting bad posture
- **IIT-Delhi Event Hosting Facility and Community Database (Prof. Maya Ramanath)** *(Jan,19 - March,19)*
  - Developed e-Profile Management System for Students/Faculties of the Institute based on React, SQL & Flask server
- **Earthquake Distinction System (Prof. S. D. Joshi)**: (*Nov,18)*
  - Distinction of different types of earthquakes on the basis of their frequency properties using MATLAB
  - Applied Dynamic Fourier Transform and special methods of spectral estimation on the seismograms obtained from IRIS

Acknowledged Assignments

- **Spine X-Ray Segmentation and Classification** (Feb, 20)
  - Segment out 8 parts of the spine from the lateral and posterior X-Ray. Classify spine X-Ray into damaged or normal
  - Awarded bonus on this assignment for exceptional work apart from full marks.
- **Augmented Reality** **(***Oct, 19)*
  - Calibration of Intrinsic and Extrinsic parameters of camera using Tsai's calibration
  - Using markers as reference, projection of 3D – objects on the video frames with desired movement.
- **Simple-RISC Pipelined Microprocessor** **(***Nov, 19)*
  - Implemented a 5-staged Simple-RISC microprocessor instruction pipeline with forwarding, branch-locks and data-locks to maximize the IPC using Logisim software.

TECHNICAL SKILLS

- **Programming Languages:** C/C++/C#, Java, Python, SQL, JavaScript, Verilog, ARM, Scope
- **Tools:** Arduino, Autodesk, NI LabView, MATLAB, RaspberryPI, Unity
- **Libraries and Frameworks:** TensorFlow, PyTorch, OpenCV, ReactJS, Django

POSITIONS OF RESPONSIBILITY

- **Technical Executive, Board of Student Publications** (April, 2018 - March, 2019):
  - Responsible for designing creative posters and magazine; Ensured hostel publicity and participation in club events
  - Worked in the management team for organizing all events in the annual literary fest of IIT Delhi, Literati 2018
- **Indoor Sports Club Rep, BRCA/BSA** (April, 2018 - March, 2019):
  - Responsible for maintaining the culture of chess, carrom and pool in hostel by conducting various intra-hostel competitions

EXTRA CURRICULAR ACTIVITIES

- **Interests:**
  - **Dance: 2nd Runner Up** in Group Dance, 2018 & **2nd Runner Up** in Duo+, 2018
  - **Chess**: Played Chess up to State Level , Won Inter-Hostel Competition in IIT Delhi.
  - **Reading**: Best reads include *Zero-To-One, Mahabharat, Thinking Fast and Slow*.
- **A.I.N.A. (An Initiative for National Advancement)**
  - **Swadesh Trips:** Exploration of rural India via week long trips to understand local culture, society, demography and problems.
  - **Manthan**: Participates in weekly discussions on issues, national development & public policies.
  - **Srijan**: Regular teaching program in the 'Munirka Basti' near IIT Delhi Campus.