Arun Kumar Singh (2019PCS0017)

भारतीय प्रौद्योगिकी
संस्थान जम्मू
**INDIAN INSTITUTE OF
TECHNOLOGY JAMMU**
विद्याधनं सर्वधन प्रधानम्

ACADEMIC QUALIFICATIONS

Year	Degree/Examination	Board/University/School	%/CGPA
2019-Present	M.Tech Computer Science & Engineering	Indian Institute of Technology Jammu	8
2014-2018	B.E in Computer Engineering	Gujarat Technological University (VGEC)	8.06
2014	Class XII	CBSE (Kendriya Vidyalya)	93.4 %
2012	Class X	CBSE (Kendriya Vidyalya)	9.8

ACADEMIC DISTINCTIONS & CURRICULAR ACHIEVEMENTS

Scholastic Achievements	- Project selected for the Ministry of Steel, Government of India under Smart India Hackathon. - Achieved Certificate of Outstanding Project Presentation at 20th and 19th National Children Science Congress for 2 years. Recipient of IAFBA Scholarship (Undergrad).
Other Achievements	- Obtained 3rd Position for Science Project at Jawaharlal Nehru Regional Science Exhibition. - Obtained 1st Rank in School & 15th in City in 7th International Mathematics Olympiad.
Skills	**Languages**: C , C++ , Java , Matlab / Octave , Python **Tools :** MySQL Workbench , Shell, LaTex , UML , Git Flow **Platforms** : Linux , Windows , GitHub , AWS and Azure Technologies

COURSES & INTERNSHIP

Neural Networks	**Course :** Neural Networks and Deep Learning in Python. **Organisation:** deeplearning.ai . Coursera (Online)
Research Internship	**Project :** Real time traffic classification using Machine Learning over Network. **Organisation :** Indian Institute of Technology Bombay.
D-Java BootCamp	**Course :** Diploma in Java (Boot camp) **Organisation :** C-DAC Ahmedabad

PROJECTS & PUBLICATIONS

Human vs AI Voice Classification	**Objective :** Classifying AI synthesised vs Human voice by Cepstral and Spectral Statistics using Machine Learning. (**Submitted paper to IEEE WIFS Conference as First Author**) - Extracted audio features by computing higher order correlations, Bi-coherence & Fourier analysis, and generated a structured data set. - Train machine learning model using various algorithms like Quadratic & Linear SVM, KNN, etc **Language & Tools :** MATLAB, Machine Learning. MATLAB Classifier and Plotting Apps.
Real Time Network Packet Detection	**Objective:** Real time traffic classification for type of network data packets using Machine Learning. - Accumulated data packets over the network using Wireshark tool and created labelled data set for classification. Train the ML model using data set. - Classify packets whether TCP or UDP on real time by collecting packets using python script. **Language & Tools :** Python, Machine Learning, MATLAB, Wireshark.
Finder & Reminder Virtual Simulation	**Objective:** Generating Virtual 3D Environment for Physical World and reminding task associated with real objects. - Developed a Unity Application for Virtual simulation of places scripted using C#. - Build a WebGL App for the same and deployed as web application on Microsoft Azure Cloud. **Language & Tools :** C#, Unity 3D, WebGL, Microsoft Azure, Visual Studio.
Image Text Identification using OCR	**Objective:** Scanning of hard copies of good's train wagon receipt, identifying text via OCR image text recognition library. - Designed a web application that stores images of wagon receipt on SQL database over Amazon cloud using AWS RDS. Connected using MySQL Workbench for DBMS managing. - Retrieved text from image obtained from database, using OCR in java application and storing back clean only text to MySQL database on AWS Cloud. **Language & Tools:** Java (Jframe), JSP, MySQL, MySQL Workbench, AWS RDS (EC2).

Other Projects (Check out my other projects on my GitHub Profile)	▪ **Digitalising the offline Tatkal Train Reservation System :** Created a paperless system by setting up Kiosk at railway stations running stand-alone Java Application Independent of Operating System. Hosted upon Java Virtual Machine that can be installed over Kiosk. Data stored and fetched by MySQL Database on AWS RDS. ▪ **Digit Recognition Using Neural Net :** Handwritten digit images are collected and converted into Grey scale images. Image of 200x200 pixels converted into a feature vector of size 40000 pixel values and fed into a neural net. Sigmoid and ReLU function used in forward propagation. Implemented back propagation. Completed in Octave Platform. ▪ **Data File conversion**, **Web Crawlers**, **House Price Prediction using Linear Regression**, **Student Admission Prediction using Logistic Regression** and other interesting projects done by me, can be found on my Github Repositories. **Github Profile :** https://github.com/arun-kmr-singh **Linked In Profile :** https://linkedin.com/in/arun-kmr-singh

POSITIONS OF RESPONSIBILITY

Teaching Assistant	▪ Worked as a teaching assistant for Python Programming subject at IIT Jammu. ▪ Worked as a teaching assistant for Web Technology subject at DA-IICT.
Event Manger Techfest at GTU	▪ Organised an online National Level Coding event under the GTU Central Tech Festival. ▪ Organised a non-technical event of Logical Problem Solving and Rubik's Cube.
Committee	▪ Headed the responsibility of disciplinary committee and mess committee of the Hostel in UG.
School House Captain	▪ Headed the responsibility of School House Captain for Green House. ▪ Successfully organised the Inter House Sports Meet and School Annual Function.

EXTRA CURRICULAR ACHIEVEMENTS

Academics & Sports	▪ Successfully Cleared Crio's OOPs challenge. Cleared 2 coding rounds of Infosys HackWithInfinity & TCS Codevita. Completed TCS software quality Assurance challenge. ▪ Part of Coding Club at IIT Jammu. Student Member of IEEE Computer Society. Secured 2nd rank in IEEE Coding challenge at IIT Jammu. ▪ Successfully trekked 55 KMs of Himalayan and Attained the Height of 13800 fts. ▪ Part of Institute football team. Won Gold Medal in inter institute football cup during Graduation 2 times.
Programming Profiles	▪ **CodeChef** : https://www.codechef.com/users/arun_kmr_singh ▪ **GeeksforGeeks** : https://auth.geeksforgeeks.org/user/arunkumarsingh/practice
Communication and Management	▪ Computer Hardware and Network Manager at School Computer Labs. ▪ Part of School Debate Team. Winner at Regional Debate Competition. ▪ Represented and won Regional Skit Competition. Anchoring at School Annual Function.
Social Services	▪ Creating awareness and assistance in raising funds for the care of elderly. ▪ Creating awareness and rendering services to solace the sufferings of cancer patients. ▪ Being active Scout at Bharat Scouts and Guides.