

Mohd. Rizwan Shaikh

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EDUCATION

International Institute of Information Technology, Bangalore Aug 2019 – Jul 2024
Integrated Masters of Technology, Electronics and Communication Engineering CGPA 3.43/4.00

EXPERIENCE

Research Intern, Surgical and Assistive Robotics Lab - IIIT Bangalore May 2022 – Present

- Working on fast and contact-less estimation of Systolic and Diastolic blood pressure using infrared thermography

Mentor, Let's Grow More Summer of Code | [Certificate](#) Jun 2021 – Aug 2021

- Maintainer for the projects '[Awesome JavaScript Projects](#)' and '[Makes Math Easy](#)'
- Raised issues, reviewed and merged pull requests from various contributors
- Helped students to get started in open source and make their first contributions

PROJECTS

Self Checkout System | *ReactJS, Firebase, Blockchain, Arduino, IoT* | [GitHub](#) Feb 2022 – Apr 2022

- Implemented a lightweight, fast, theft-proof, privacy preserving self-service checkout system which solves the problem of cumbersome queues at billing counter, eliminates the need of cashier while following Covid appropriate norms
- Implemented web application using ReactJS, used RFID tags & readers for identifying products, Ethereum blockchain for maintaining user anonymity and enabling secure transactions and Firebase as a shared communication medium

Image Captioning | *TensorFlow, Keras, CNN, LSTM, GloVe* | [GitHub](#) Mar 2022 – May 2022

- Adopted transfer learning via a pre-trained Inception v-3 network to extract feature vectors from the images
- Created a custom merged model based on LSTM to combine and train the image vector and captions
- Implemented Greedy search and Beam search decoders to generate the captions from the model predictions
- Achieved a high BLEU score on Flickr8k dataset

Computer Malware Detection | *Machine Learning, Big Data, Classification* | [GitHub](#) Oct 2021 – Dec 2021

- Devised strategies to process and train models for big data
- Carried out batch-wise processing and incremental learning due to big data nature of the input
- Tried out various training strategies for high classification accuracy and finally settled on LightGBM setup

Memories | *JavaScript, MongoDB, ExpressJS, ReactJS, NodeJS, Material-UI* | [GitHub](#) Jan 2021 – Feb 2021

- Developed a full-stack web application using MERN stack
- Implemented CRUD operations for users and posts, user authentication with email(JWT) and Google OAuth and server-side pagination

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript, HTML/CSS, MATLAB, Verilog, LaTeX
Frameworks: NodeJS, ReactJS, MongoDB, GraphQL, Flask, Django, MySQL
Developer Tools: Git, GitHub, VS Code, Heroku, Vim, Jupyter
Other skills: Arduino, Raspberry Pi, LTSpice XVII, NI Multisim

RELEVANT COURSES

Computer Science : Data Structures and Algorithms, Computer Networks, Operating Systems, Digital Logic Design, Computer Architecture, Machine Learning, Visual Recognition
Electronics and Communication : Basic Electronics, Signals and Systems, Digital Signal Processing, Microprocessors and Micro-controllers, Principles of Communication Systems, Digital Communication, Internet of Things
Mathematics : Calculus, Linear Algebra, Differential Equations, Abstract Algebra, Probability and Statistics, Mathematics for Machine Learning

POSITIONS OF RESPONSIBILITY AND EXTRACURRICULAR

Teaching Assistant : EC 304-Signal Processing (Spring 2022)
Activities and Societies : DebSoc (Debate Society), Zense (Software development club) and Enigma (Robotics club)

AWARDS AND ACHIEVEMENTS

Selected as one of the 500 recipients of Linux Foundation LiFT scholarship 2021 worldwide.
Secured All India Rank of 9203 in JEE mains 2019 among 1.4 million candidates.