RUTWIK RAJANAGOUDA PATIL

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Visa Status: Tier 4 General Student (No sponsorship required)

EDUCATION

MSc Artificial Intelligence and Machine Learning (Expected Grade - 2:1)   2021 - 2022
University of Birmingham, Birmingham, United Kingdom

<u>Modules:</u> Machine Learning and Intelligent Data Analysis, Neural Computation, Computer Vision, Data Visualisation and Mathematics of Artificial Intelligence

B.Eng. in Electronics and Communication Engineering (Achieved CGPA - 8.12)   2015 - 2019
Basaveshwar Engineering College, Bagalkot, India

<u>Modules:</u> Embedded System Design, Advanced C Programming, Computer Networks, Multimedia Communication

TECHNICAL SKILLS

- C, Python and Django Web App development (https://rutwik-r-patil.herokuapp.com/)
- NumPy, SciPy, Seaborn & Pandas Libraries
- Sci-kit Learn, TensorFlow Libraries of ML, NLP, Computer Vision and Deep Learning
- MATLAB for Signal Processing, Deep Learning and Computer Vision
- Git

PATENT

- India Patent 202041036016: "A Method and System for Electronic Card tray ejection".   Aug 2020

PROFESSIONAL EXPERIENCE

OPPO Mobiles India Pvt Ltd., India R&D Centre, Hyderabad, India.   June 2019 – Jan 2021
Software Quality Engineer

- Assisted in Android systems development by designing system solutions, evaluating the system software functions and its performance.
- Contributed to identify and locate the root causes of software bugs by log analysis on Android solution projects (Find X2 Series, F17 Pro), OS upgrade for Android 10 (Reno 2 Series, F15, F11 Pro) and Android 11 (F17 Pro).
- Learned Agile software development and its evaluation by using Kanban methodology which focused on test driven development.

VihaanSudhan Technologies, Mysuru, India.   July 2017
Embedded System Software Developer-Intern

Raspberry Pie (Sensor Interfacing, IOT and Machine Learning)

- Part of the project team, to create an ML application for event attendance evaluation by facial recognition and automatic ID check in conference. Interfacing Camera, RFID and Machine Learning on Raspberry Pi board and records were updated on server via IOT.
- <u>Skills Developed</u>: - Sensor integration, Machine Learning Model implementation and algorithm optimisation
- <u>Technology</u>: - *OpenCV, CNN, IOT, Sensor Data processing*

PROJECTS

Semantic Segmentation of Heart MRI using Deep Learning (Project link)   Nov-Dec 2021

- Collaborated with colleagues to develop an automated methodology, using Convolution Neural Network (CNN) that can segment a CMR image into four heart regions. Used data augmentation to virtually increase dataset and transfer learning on Efficient Net B4 to achieve 90.4% model accuracy.

- Contributed majorly to the team for developing the code for data augmentation to increase dataset, hyperparameter tuning and final project report.

Machine Learning and IOT based Self Driving Car ([Project link](#))   Jan – May 2019

- Associated with three others to design a self-driving car using IoT, RF and Machine Learning technologies. Camera video feed was processed on Convolution Neural Network (Alex Net) to train a model and make steering control decisions in real-time all from a single server computer.
- Played a vital role in developing optimised algorithm for reduced processing and control latency, spearheading server computing approach.
- This project gave an insight, to implement Machine Learning for designing the Autonomous vehicle system.

Krishi Mitra (Farming Robot) ([Project link](#))   Feb – Apr 2018

- Built a machine using Arduino Programming, Eagle CAD, NodeMCU ESP8266 for plant nursery which automated the process of sowing seeds, dispensing water, fertilizer, and insecticides effectively.
- Project was sponsored by New Age Incubation Network, Govt. of Karnataka.

Portfolio Website ([Project link](#))   March 2022

- Developed a portfolio website showcasing my projects and skills. Primarily worked on backend development of web application using Django and Python with media and file hosting incorporating version control.
- This project helped in understanding use of Platform as A Service (PAAS) for deployment.

ACHIEVEMENTS

- Recipient of K C Mehra Computer Scholarship for the year 2012-2013 for topping the computer scholarship exam.
- Secured consolation prize for the project 'IoT based Women Safety Device' at SHRISHTI 2017 Exhibition
- Represented college at National Innovation Festival held by Govt. of India at Visvesvaraya Industrial and Technological Museum, Bangalore
- Runner-Up at Visvesvaraya Technological University, Archery Group Men for the year 2019-2020.

MEMBERSHIPS AND RESPONSIBILITIES

- Active IEEE member (Membership number: - 93734740), which allows me to access, analyse and review the cutting-edge research in my field and connect with IEEE members and events worldwide.
- Department ACME (Association for communication and Modern Electronics) office-bearer for the year 2017-2018, involved in organizing and coordinating National Level Technical Festival.
- Student member of Institution Innovation Cell (IIC) of the college established under MHRD (Ministry of Human Resource Development), Govt. of India.