RUTWIK RAJANAGOUDA PATIL

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OBJECTIVE

Artificial Intelligence and Machine learning, Masters student at University of Birmingham, with experience in agile software application development and testing, research skills looking forward to building a career in Artificial Intelligence with an emphasis on gaining strong knowledge on research and niche technologies.

EDUCATION

MSc Artificial Intelligence and Machine Learning (2:2 Expected)   September 2021 - September 2022
University of Birmingham, Birmingham, United Kingdom
Modules: Machine Learning and Intelligent Data Analysis, Neural Computation, Computer Vision

B.Eng. in Electronics and Communication Engineering (8.12 CGPA)   August 2015 - May 2019
Basaveshwar Engineering College, Bagalkot (Affiliated to VUT, Belagavi), India
Modules: Embedded System Design, Advanced C Programming, Computer Networks, Multimedia Communication

11th and 12th Grade Science (Karnataka State Board) **(86%)**   June 2013 - May 2015
Mahesh PU College, Belagavi, India

10th Grade (CBSE) (9.8 CGPA)
The Forbes Academy, Gokak Falls, India

TECHNICAL SKILLS

- **C, Python** and **Django Web App development** (https://rutwik777carhouse.herokuapp.com/)
- **NumPy**, **SciPy**, **Seaborn & Pandas** Libraries for data manipulation
- **Sci-kit Learn, TensorFlow** Libraries of **ML, NLP, Computer Vision** and **Deep Learning** algorithms
- **MATLAB** for **Signal Processing**, **Deep Learning** and **Computer Vision**
- **GIT** for version control

PATENT

- Indian Patent 202041036016: "A Method and System for Electronic Card tray ejection", Filed August 21, 2020.

WORK EXPERIENCE

OPPO Mobiles India Pvt Ltd., India R&D Centre, Hyderabad, INDIA   June 2019 – January 2021
Designation**:** - Software Quality Engineer
Role & Contributions: -

- Designing system solutions and evaluating the software functions and performance throughout complete Android system development lifecycle.
- Worked on identifying and locating root causes of software bugs by log analysis on Android Solution projects (Find X2 Series, F17 Pro) and OS upgrade for Android 10 (Reno 2 Series, F15, F11 Pro) and Android 11 (F17 Pro).
- Skills Developed: Agile and Kanban Software development, Android system log analysis and debugging, test driven software development.

INTERNSHIP

VihaanSudhan Technologies, Mysuru, INDIA   July 1 – July 15, 2017
Raspberry Pie (Sensor Interfacing, IOT and Machine Learning)

- Part of the project, 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.
- Skills Developed: - Sensor integration, Machine Learning Model implementation and algorithm optimisation
- Technology: - *OpenCV, CNN, IOT, Sensor Data processing*

PROJECTS

Semantic Segmentation of Heart MRI using Deep Learning ([Project link](#))   **November-December 2021**

In this coursework project, in field of Medicine, developed an automated methodology using CNN that can segment a CMR image into four heart regions. Used image augmentation to virtually increase dataset and transfer learning on Efficient Net B4 to achieve 90.4% accuracy.

Skills Developed: - CNN's, Image segmentation, Image Augmentation and Transfer Learning
Key contribution: - Decided and wrote the main code for image augmentation to increase dataset, hyperparameter tuning, final project report.
Technology Used: - *CNN's, Transfer Learning, Data Augmentation*

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

In this dissertation project, a self-driving car based on IoT, and RF is successfully achieved machine learning using Convolution Neural Network (Alex Net) to train a model, GPU computing to capture input camera video frames, process it, and make steering control decisions in real-time all from a single server computer.

Skills Developed: - Implementing Machine Learning in real world problem, CNN's and Autonomous vehicle system design
Key contribution: - Decided server computing approach, optimised Algorithm for reduced processing and control latency
Technology Used: - *CNN's, IOT*

Krishi Mitra (Farming Robot) ([Project link](#))   **February – April 2018**

Designed and developed a machine for plant nursery automation that can reliably sow the seeds, dispense water, fertilizer, insecticides. This project is selected and sponsored by NAIN, Govt. of Karnataka.

Skills Developed: - PCB Design by Eagle CAD, GPS data collection and processing, Safety Critical Embedded System and Algorithm Design
Key contribution: - Coded the algorithm and designed GPS
Key Achievement: - This project is selected and sponsored by NAIN, ITBT Dept, Govt. of Karnataka.
Technology Used: - *Arduino Programming, Eagle CAD, RFID (RC552), and GPS (NEO-6M).*

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
- Participated 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), (**benefit of membership to employer**)
- 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.