RAGHUL G

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EDUCATION

Bachelors of Information Technology, St. Joseph's Institute of Technology 2020 - 2024
Relevant Coursework: Algorithms, DataStructures, Operating Systems, DataBase Management Systems
CGPA (Penultimate Year): **8.79/10.0**

Higher Secondary, AV Meiyappan Mat. Hr. Sec. School 2019 - 2020
Relevant Coursework: Higher Secondary in Computer Science Degree with an aggregate **85.33%**.

SKILLS

Technical Skills	Python, Java, C, HTML, CSS, JavaScript
Frameworks	Tensorflow, Keras, OpenCV, Pytorch, Scikit-learn
RDBMS	MySQL
Bigdata Tools (Beginner)	Hadoop, Pig, Spark

EXPERIENCE

Data Science Analyst - Technology Analyst I Intern Feb 2023 - Present
Niograph Technology Consulting LLP *Indore, Madhya Pradesh*

- Task is to work with Stacks namely **Machine Learning, Data Lakes, CRISP-DM, and Building Data Analytics Solutions using AWS**
- Followed Scalable Machine Learning, Data Engineering, Data Analysis with **Data Bricks**.

Machine Learning Intern Apr 2022 - May 2022
Stigmata Techno Solutions *Chennai, TamilNadu*

- Detected the AWS False keys which have the same features as the real ones. Stated as a two-class classification Model - framed **Logistic Regression** for that, and achieved **75%** of accuracy.
- Then tried **Long Short Term Memory (LSTM) with a Natural Language toolkit** to achieve accuracy up to **95%** of the prototype.
- Developed a prototype that detects **70%** to **80%** percent of False AWS Key correctly with some tight approximation. The final accuracy calculated was **91** percent.

Data Science Intern Feb 2022 - May 2022
AP-3 Solutions *Chennai, TamilNadu*

- Worked on Satellite Imagery Processing to 4 detect objects namely Forests, Water, Buildings, and Empty Land.
- Led the Intern team which led to an **80%** of improvement in prototype and research
- Developed a model using **Faster RCNN - one of the advanced formats of CNN with RPN(Regional Proposal Network)**. Achieved greater accuracy up to **80%**for finding objects in the images.

PROJECTS

3D Printing of Pharmaceuticals using Artificial Intelligence. Jul 2021 - Jan 2023
Link to the Project

- Built a prototype which is to automate the process of solid pharmaceutical production using **3D printing Fused Deposition Model**.
- Achieved greater accuracy in all the modules ranging from **80% to 90%**
- Tech Stacks Used: **Pytorch, Tensorflow, Scikit-learn**

False Crypto Currency Detection and Prediction Nov 2022 - Dec 2022
Link to the Project

- Scaled to detect the 11 types of false Crypto key and validate the future volume in using **LSTM and Conjugated LSTM.**
- Final Accuracy calculated is **91%** for LSTM. For Conjuagated LSTM, accuracy scaled up to **90%** which is better than other models suggested.
- Tech Stacks Used: **Tensorflow, Keras, Scikit-Learn**

Automation of Fluoroscopic Imaging July 2022 - Sep 2022

Link to the Project

- Proposed a model to automate the process of fluoroscopic imaging and worked with almost 10,000 X-Ray images to diagnose.
- Adaboost Regressor gave a **91%** score, PCA decomposes with a score of **72%** to pass the decomposed images to AdCNN.
- Accurate predictions up to **91%** and AdCNN accuracy is **93%** measured.
- Tech Stack Used : **IBM Quantum, Qiskit, Tensorflow, Keras, Scikit-learn**

Supply Chain Event Management and Anomaly detection Expected Completion: Feb 2023

- Idea is to model a prototype that can detect anomalies and event prediction in supply chain event management that can increase the company's firm to **75%**.
- Proposed a model namely **Random Cut forest (RCF)** to detect the anomalies and the target is to get **90%** accuracy.
- Tech Stack Using : **AWS SageMaker, boto3, Tensorflow Amazon S3, Amazon QuickSight**

Advance Reverse Image Search Expected Completion : Mar 2023

- Idea is to model a prototype that can detect known images in advance and find insights from the unknown images using Advance Reverse Image Search.
- Proposed a model namely **CNN Image Recognition, InfoGAN, SRGAN** to detect the known and unknown images, and the predicted target is to get **85%** accuracy.
- Tech Stack Using: **Pytorch, Keras, Tensorflow, Computer Vision, Image Processing and Image Generation**

EXTRA-CURRICULAR ACTIVITIES

Siemens Shift Hackathon	Finalist 10th/500 — Grabbed 1000INR as finalist incentives
KPMG Malta Hackathon	Finalist - Grabbed 30$ as incentives
TamilNadu Police Hackathon	4th/10 - Grabbed 3000 INR as incentives
Rapid Hackathon	Finalist - Grabbed 30$ as incentives
Innopreneurs Idea Hackathon	Finalist (50/5000)
BIAL Genie Hackathon	Finalist - Grabbed 30$ as incentives
Techgium 2022	Second Phase — Idea Shortlisted
Techathlon 2023	1st in Paper Presentation

PUBLICATIONS

[1] Intelligent Automation of Pharmaceuticals Production using 3D Printing *June 2023*

Expected Submission: June 2023

[2] Automation of Fluoroscopic Imaging through AI *Feb 2023*

Journal of X-RAY and Imaging, ABAP (Initial Version), ICRABES 2022

[3] Mask Segmentation and Object Detection in Satellite Imagery *May 2022*

IESEE 2022, ICAIS 2023, IEEE EXPLORE 2023