Rahul Singh

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EXPERIENCE

Research Assistant **Gannon University, Erie PA** **Aug 2022– May 2023**

- Successfully trained and qualified a reinforcement learning-powered race car for two rounds in the AWS Deep Racer Competition, achieving an impressive time of **2.32 minutes**.
- Mentored and facilitated lab sessions for **10 undergraduate** students, providing effective guidance in the practical application of reinforcement learning techniques.
- Employed the **AWS-Robomaker** simulation environment to refine the Deep Racer model and collaborated with a team to optimize its hyperparameters using Bayesian optimization and grid search techniques, resulting in an impressive improvement of approximately **30%** in lap times and a notable reduction of **10%** in variability.
- Significantly improved the drone's performance and capabilities by utilizing the **Opti-track system** in conjunction with the **CRAZYFLIE drone** to capture highly precise motion data.
- The integration of comprehensive datasets collected through the Opti-Track system resulted in approximately **36%** enhancement in the drone's overall performance.

Global Student Assistant **Gannon University, Erie PA** **Oct 2021–May 2023**

- Utilizes ImageNow software to scan and file confidential international student documents, ensuring proper organization and security, representing **15%** of the role.
- Demonstrates proficiency in Microsoft Excel (**VLOOKUP**, **SUMIF, INDEX-MATCH, Pivot chart**)to create and manage spreadsheets, perform data analysis, and generate reports, contributing to **30%** of the role.

Python Developer **Make my clinic Pvt Ltd** **Aug 2020 – May 2021**

- Design e-commerce platforms for multiple clinic products and services using Python and related frameworks such as **Flask**.
- Collaborated with front-end developers to integrate e-commerce platforms with the clinic's website or mobile app, resulting in seamless integration with an **85%** functionality rate.

EDUCATION

M.S. Computer Information Science-*Data* Science Gannon University, PA ***GPA**: 3.875* **May 2023**
Coursework: Cloud Computing, Big Data, Data Visualization, Statistical Computing, Data Mining, Text Mining.

Bachelors - Information Technology Mumbai University, India ***GPA**: 3.25* **July 2020**
Coursework: Data Structure and Algorithm, Python, Java, DBMS, PHP, C language, Operating Systems, ASP.NET.

SKILLS

Programming Language: Python, C/C++, SQL, HTML/CSS, JavaScript, ReactJS.
Technologies: Flask, Django, Postman, MongoDB, No SQL, Snowflake, Postgre SQL, Spark, AWS(EC2, S3, Lambda), Kafka.
Visualization: Tableau, Power BI, Advance Excel, PowerPoint, Visio, Power BI, Business Analysis, Qlik Sense, SSRS.
Frameworks: Git, AWS & GCP Services (Cloud Functions, CloudWatch, Lambda, Athena), Agile Methods, Kubernetes.
Libraries: - TensorFlow, Pandas, NumPy, Spark, Pytorch, OpenCV, Keras, Matplotlib, Scikit-learn, Beautiful Soup, Selenium.

PROJECTS

Identification of common defects in modern web browsers **Dec 2022 - ongoing**

- Performed web scraping using **Selenium** to collect bug data from repositories of Firefox and Chrome, resulting in a dataset of **6 million** and **8 million Large Datasets** respectively.
- Implemented K-means clustering and TF-IDF techniques to refine the dataset by grouping similar synonyms and removing less important words occurring below **0.2%**, resulting in a more accurate and focused dataset.

Thyroid Detection:- GitHub Link **Feb 2022 - May 2022**

- Developed a scalable end-to-end machine learning pipeline utilizing **clustering** and **classification** techniques to accurately determine compensation for hypothyroidism in patients and the AUC score of **0.9%**.
- Achieved an impressive accuracy of **94.5%**, ensuring reliable and accurate predictions for patient diagnosis.

Wafer Fault Detection:- GitHub Link **Oct 2021 - Dec 2021**

- Developed and deployed a highly accurate predictive system to assess the performance of wafers across multiple sites achieving an impressive **87**% accuracy in identifying damaged wafers, enhancing efficiency, and reducing costs.

Heart Failure (HF) Prediction:- GitHub Link **Aug 2021 - Sep 2021**

- Predicted the outcome of Heart Failure Using Correlations analysis, K-mean, and Principal component analysis (PCA).
- Identify the key feature using machine learning classifiers, a patient's survival can be predicted based on important clinical features and got **88%** accuracy.

CERTIFICATION

Agile Software Development | Terraform on Azure | Google Data Analyst | Tableau | Neural Networks & Deep Learning
Rest API Intermediate | Postgres SQL | Hacker Rank SQL | Hacker Rank Python | Microsoft Excel | Microsoft Power BI