Rahul Nagarajan

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EDUCATION

California State Polytechnic University, Pomona   **Pomona, CA**
Master of Science in Computer Science; GPA: 4.0   *Aug. 2021 – May 2023*

SRM Institute of Science and Technology   **Chennai, India**
Bachelor of Technology in Computer Science and Engineering; GPA: 3.42 (8.65/10)   *July 2017 – May 2021*

EXPERIENCE

Research Assistant   **Dec. 2021 – May 2023**
Cal Poly Pomona PolySec Lab   *Pomona, CA*
- Initiated a novel research project exploring EEG signals for user authentication through machine learning models.
- Engineered the full design and deployment of project modules to enhance EEG signal pre-processing, feature extraction, and selection. This improved overall system accuracy by 10%.
- Exceeded project supervisor expectations by delivering high-quality research within stringent deadlines, aiding the forward momentum of the research group.

Data Analyst Intern   **Jun. 2019 – Jul. 2019**
Aegis Info Business Solutions Pvt. Ltd.   *Chennai, India*
- Leveraged SQL for data analysis to uncover critical trends that were transformed into actionable business strategies, contributing to a 2% boost in sales.
- Utilized Power BI to develop comprehensive dashboards and visualizations, simplifying complex data sets into easily comprehensible insights for data-backed business decisions.

PROJECTS

EEG Authentication Model *(Python)* — Link
- Constructed an EEG-based user authentication model using Python (Pandas, NumPy, SciKit-Learn and PyTorch).
- Enhanced FFNN model accuracy from 93% to 96% through meticulous hyperparameter tuning.

Resume Parser *(Python)* — Link
- Built a resume parser using SpaCy's Named Entity Recognition (NER) system.
- Trained and validated the model to consistently extract key information from various resume formats.

Control Flow Graph Generator *(Java)* — Link
- Created a Control Flow Graph (CFG) Generator in Java to visualize code execution paths from source code.
- Differentiated code blocks and tracked control flow, improving comprehension and debugging processes.

Geo Quiz App *(Kotlin)* — Link
- Designed and implemented a GeoQuiz mobile application using Kotlin.
- Accomplished all bonus challenges from the Big Nerd Ranch Guide, enhancing app features such as cheat prevention, localization, and advanced lifecycle management.

BRCM System *(Java, PostgreSQL)* Link
- Directed end-to-end system development lifecycle from requirement specification to architecture design, enhancing comprehension and communication of system functionalities.
- Devised an efficient data structure by consolidating redundant entities, improving data integrity and operational efficiency.

SKILLS

Programming Languages: Python, C++, SQL, Java, JavaScript, Kotlin

Tools and Libraries: Git, Flask, FastAPI, Power BI, SpaCy, NumPy, Pandas, SciKit-Learn, PyTorch

Database Management: SQL, MySQL, PostgreSQL

Machine Learning: Regression, Classification, Clustering, Neural Networks

Software Development: Agile, Scrum, Object-Oriented Programming, Test-Driven Development