RAHUL NAGARAJAN

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Education

California State Polytechnic University **August 2021 – Present**
Master of Science in Computer Science; GPA: 4.00 *Pomona, CA*

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

Relevant Coursework

- Algorithm Analysis
- Software Metrics
- Software Engineering
- Computer Architecture
- Artificial Intelligence
- Software Security
- Application Development

Experience

Cal Poly Pomona **December 2021 – Present**
Research Assistant *Pomona, CA*

- Performed Extensive Research on Electroencephalogram signals in the context of cyber security
- Conducted an informative seminar for undergraduate students that covered the fundamentals of EEG signals, feature extraction, and classification algorithms, as well as a code walkthrough
- Currently assigned to work on a full stack project that can perform user authentication using EEG signals incorporating software/tools like Emotiv Pro, Phsycopy, Matlab and Google Colab

Projects

Personal Portfolio Website | *HTML, CSS, JavaScript (Repo 🔗)* **July 2020**

- Developed a personal portfolio website using HTML, CSS, JQuery, Bootstrap and various open-source plugins/libraries
- Designed to be fully responsive

Control Flow Graph Generator | *Java (Repo 🔗)* **November 2021**

- Developed a Java program that takes pseudo-code as an input and generates a corresponding control flow graph
- Implemented to handle nesting of conditional statements and loops

DOTA 2 Hero Recommendation System | *Python, Google Colab (Repo 🔗)* **December 2021**

- Developed a Python Program to evaluate the best hero line-up and consequently the winning team
- Implemented using Apriori Algorithm and Multi-Layer Perceptron Neural network

Resume Parser | *Python, Google Colab (Repo 🔗)* **May 2022**

- Created a Python Program which accepts a resume in either pdf or docx format to generate a summary of the resume
- Designed using a custom NLP Named Entity Recognition Model to accurately pinpoint the relevant keywords in a resume

EEG Authentication | *Python, Jupyter Notebook (Repo 🔗)* **November 2022**

- Created a machine learning model which can authenticate a specific user among other users using their EEG dataset.
- Used the XGBoost classifier to classify if the user is authenticated to the system or not, with the level of confidence percentage.
- Performed hyperparameter tuning on the classifier using grid search to increase the initial accuracy of 90% to 93%

Technical Skills

Languages: C++, Python, Java, HTML/CSS, JavaScript, SQL
Developer Tools: VS Code, Eclipse, Jupyter Notebook, Google Colab, Android Studio, GanttProject, Balsamic Wireframes, SQL Power Architect, pgAdmin
Technologies/Frameworks: Virtual Box, Kali Linux, GitHub

Extracurricular

- Lead Researcher among the team of 5 members working on a EEG based user authentication project
- 5-star problem solver in HackerRank with basic problem-solving certification
- Attended the beginner and intermediate Machine Learning track hosted by Google AI