Aaronn Mach

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EDUCATION

University of California, Riverside | Riverside, CA **Projected Graduation**: May 2025
Bachelor of Science, Computer Science
Relevant Coursework: Calculus I, Calculus II, Discrete Structures, Introduction to Data Structures I, II, III, Physics, Software Construction, Machine Assembly

PROFESSIONAL EXPERIENCE

ForUp | Los Angeles, CA June 2023 - September 2023
Software Engineering/Machine Learning Intern

- Explored the utilization and effectiveness of Natural Language Processing(NLP) and Large Language Models (LLM) based on specific clientele requirements.
- Fine tuned ELMo, an LLM that specializes in word context and processing, improving its accuracy by 28% and ensured smooth deployment into project frameworks.
- Implemented data preprocessing techniques to optimize input data quality for machine learning models, contributing to improved overall model performance and efficiency.

Chapman University Research Internship | Fullerton, CA April 2021 – August 2021
Data Visualization Research Intern

- Shadowed Professor Yu Xin Wen, who specializes in data science and data analytics in real world systems.
- Contributed to the research in the process of detecting defects in wafer maps during semiconductor manufacturing operations.
- Directed two other interns, by relaying and reviewing the information learned from Dr. Yu Xin Wen.

Cal Poly Pomona STEAM Academy | Pomona, CA June 2021 - August 2023
Student Intern

- Learned Python programming skills via the MIT Beaver Works curriculum.
- Employed MIT autonomous RACECAR program, learned about an algorithm to refine navigation in complex environments.
- Collaborated with other interns and field employed CPP alumni to augment the algorithm's problem-solving capabilities.

PROFESSIONAL AFFILIATION AND INVOLVEMENT

Career Cipher
Officer

- Managed event concepts and led presentations
- Directed and presented members with problem sets, puzzles, and other computer science material.

PERSONAL PROJECTS

League Of Legends Winning Prediction Model

- Model that predicts winning teams based on a League of Legends(LoL) ranked game dataset on Kaggle.
- Utilizes a Decision Tree and GridSearch Cross Validation for tuning hyperparameters
- Visualized with seaborn heatmaps, histograms, confusion_matrices, and bar graphs
- Dependencies: Python3, SciKit-Learn, pandas, numpy, matplotlib, seaborn

Weather Forecasting Model

- Predicts the temperature based off of NOAA weather dataset based in New York City with feature variables precipitation, temp max/min, snow depth
- Used Linear Regression Models(Ridge and RandomForestRegressor), tuned with rolling averages, temp max/min, time series data; visualized using graphical data and charts
- Dependencies: Pandas, SciKit-learn, matplotlib

SKILLS/INTERESTS

Programming Languages: Python, C++, HTML, CSS
Frameworks/Libraries: SciKit-learn, Pandas, Seaborn
Other Skills: Git, Microsoft Suite
Interests: Basketball, Fashion, Video Games, Lifting, PickleBall, Catan(Strategy Board Game), Poker