Abdulrahman Sinjab

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EDUCATION

University of California, San Diego ***Sep. 2021 - June 2024***

- ***Cognitive Science: Machine Learning (B.S.)***

WORK EXPERIENCE

Machine Learning Researcher UCSD Design Lab **Jan 2024 - Present**

- Conducted research with Professor Keolu Fox regarding the energy consumption of **GPUs**.
- Developing a plan for **optimizing Machine Learning algorithms** for GPUs to reduce **power consumption**.
- Researching methods to build earth-friendly data centers.

Machine Learning Engineer, Targimo **Sep 2023 - Present**

- Developed machine learning-based login credentials page for Targimo's **user interface**.
- Contributed to the design and implementation of a machine-learning algorithm for prioritizing user emails.
- Utilized machine learning techniques to **optimize** and solve everyday user problems for the company platform.

Research Intern, UCSD Shiley Eye Center **Jan 2019 - May 2019**

- Acquired knowledge of lab equipment and procedures and briefed patients about the types of equipment that we may use in the study.
- Used **Excel** in collecting and normalizing patients' **data** which consisted of the results across various eye exams and the type of drug they were assigned to take.

PROJECTS

Ethereum Fraud Detector ***March 2023***

- Developed and led a group project to combat Ethereum fraud by designing and implementing methods to classify and predict fraudulent transaction anomalies in the network.
- Preprocessed and analyzed two Ethereum datasets from Kaggle to develop a supervised machine learning decision tree ensemble incorporating **XGBoost, logistic regression,** and **random forests**, successfully classifying fraudulent and safe transactions.
- Implemented normalized **confusion matrix** and **precision-recall curves** to measure and evaluate our model's performance and identify improvement areas.

Epileptic Seizure Recognition ***May 2023***

- Spearheaded the development of machine learning models for EEG seizure prediction by leveraging spectral analysis and **feature extraction** techniques, resulting in a highly proficient **K Nearest Neighbors** classifier with **99.13% accuracy** on test data.
- Conducted exploratory data analysis (EDA) and feature engineering on EEG datasets to identify predictive patterns in brain electrical signaling, utilizing Welch's method for **spectral analysis**.
- Implemented **regularization** techniques and scaled feature sets to **optimize** model performance for large-scale EEG datasets with multiple channels, leading to **scalable** and efficient machine-learning solutions for seizure detection.

Pollution Risk Analysis of Cardiovascular Disease ***April 2022***

- Designed interactive **geospatial data-driven** maps and other front-end visualizations with Jupyter Notebook.
- Increased understanding of risk analysis of pollution rate within cities located along the West Coast region and the rate of cardiovascular disease among the populations within the cities.
- Supervised and feature-engineered the back-end portion of the project using a **linear regression** model that classifies if a "West Coast" city population is at risk of cardiovascular diseases based on the rate of pollution.

SKILLS

- *Languages:* Python • C++ • Java • JavaScript • HTML/CSS • R
- *Libraries:* NumPy • Pandas • SciKit-Learn • PyTorch • TensorFlow • Matplotlib • NumPy
- *Tools:* Jupyter • Microsoft Excel • Git • GitHub • Visual Studio Code

Certificates/Awards

- *Learn C++ Course (Codeacademy)*