Paul Edelman

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Education

University of Delaware Newark, DE

Bachelor of Science in Computer Science, Bachelor of Arts in Applied Mathematics *Aug. 2023 – May. 2027*

Experience

Physics Lab Intern June 2022 – August 2022

Delaware State University OSCAR Lab *Dover, DE*

- Engineered multi-sensor data acquisition by interfacing a Raspberry Pi with weather instruments and Arduino boards using Python, C, and Matlab.
- Implemented communication protocols (I2C, SPI) and sensor calibration techniques to ensure precise and real-time data collection.
- Developed robust data processing scripts in Matlab for signal filtering, statistical analysis, and visualization of environmental data.
- Presented research findings at a DSU symposium, effectively communicating technical methodologies and results.

Undergraduate Teaching Assistant August 2024 – Present

University of Delaware *Newark, DE*

- Led weekly lab sessions and discussion groups focused on Python programming, data structures, and algorithmic problem-solving.
- Utilized tools such as Jupyter Notebook and GitHub to demonstrate coding best practices and collaborative version control.
- Developed supplementary course materials and debugging workshops, enhancing students' practical understanding of computational concepts.
- Collaborated with faculty to refine curriculum and integrate industry-relevant programming techniques.

Lifeguard May 2024 – Present

Delaware State Beach Patrol *Rehoboth, DE*

- Executed advanced lifesaving techniques and emergency response protocols in dynamic, high-pressure scenarios.
- Utilized communication tools (radios, mobile devices) to coordinate effectively with emergency services and team members.
- Achieved certification in EMR, CPR, AED, and First Aid, demonstrating proficiency in emergency medical interventions.

Projects

Block-Smash | *Javascript, Python, Flask, NodeJS, PyTorch* Jan. 2024 – June 2024

- Levereaged JavaScript for a responsive front-end and NodeJS to manage robust server-side functionalities.
- Engineered a secure and scalable back-end using Python and Flask, ensuring real-time game state management, seamless user session handling, and efficient score tracking.
- Architected and deployed Smash-Bot, an AI game agent powered by PyTorch neural networks, to analyze gameplay and develop patterns and execute high-scoring strategies.
- Enhanced technical proficiency in full-stack development, neural network design, and server management, solidifying expertise in game development and real-time data processing.

PredictSports | *Python, SQL, Playwright, TensorFlow* Jan. 2025 – Present

- Aggregated and pre-processed 60 years of NFL game statistics, integrating data from diverse sources into a structured SQL database for efficient querying.
- Trained an advanced LSTM model using TensorFlow to forecast outcomes of recent NFL games, achieving an accuracy exceeding 50%.
- Enhanced technical proficiency in SQL, machine learning, and neural network architectures, contributing to an end-to-end predictive sports analytics solution.

Technical Skills

Languages: C/C++, Python, JavaScript, SQL (Postgres), Java, HTML/CSS, R
Frameworks: React, Node.js, Flask, WordPress, FastAPI
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: PyTorch, TensorFlow, pandas, NumPy, Matplotlib