Christian X. Miller

Contact Information: 440-522-7931 | xmiller32878@gmail.com /cmille47@nd.edu | Cleveland, OH
GitHub: https://github.com/christian-miller20 | LinkedIn: https://www.linkedin.com/in/christianxmiller/

EDUCATION

University of Notre Dame	Notre Dame, Indiana

Bachelor of Science | Computer Science Engineering | GPA 3.9 | Dean's List 4x | Association of Old Crows   **May 2024**

SKILLS

Programming Languages: Go, Python, C/C++/C#, Java, MATLAB, JavaScript, Ruby, PHP, HTML/CSS, SQL/NoSQL, React
Software: Git, Unix/Linux Kernel, Windows, JIRA, Confluence, Pandas/Numpy, Node.js, .NET, Docker, Visual Studio, AWS
Areas of Expertise: Database Management, API Design, Web Development, AI, Big Data, Computer Vision, Agile Methodology
Coursework: Operating Systems, Statistics, Machine Learning, Adv. Databases, Algorithms, Signals Processing, Data Visualizations

WORK EXPERIENCE

Dispatch   **Remote**
Full-Stack Software Engineering Intern   **May – August 2023**

- Retrofitted Ruby on Rails backend and database infrastructure to support concurrent uploads of 8 photos in the frontend app
- Communicated with clients to integrate additional features and webhooks into the API, resulting in a weekly revenue boost of over $10,000 and reducing the frequency of personalized client requests for specific data
- Led a comprehensive overhaul of existing API documentation to accommodate new microservices architecture using Swagger UI and React, creating an intuitive interface that automatically updates with each API modification

Aeye Inc.   **Dublin, California**
Computer Vision Software Engineering Intern   **June 2021 – August 2022**

- Visualized in 3D 1000+ frames of raw LiDAR automotive software data through an innovative VR application in C# with Unity Game Engine, culminating in demonstration at Consumer Electronic Show (CES) 2022
- Rendered 2GB frame data CSV files with no detriment to user experience through concurrency/multi-threaded algorithms
- Overhauled the non-linear LiDAR shot pattern generation process by designing a Python Tkinter UI with internal logic and easy-to-use interface, opening the mechanism to more than 60% of the company

RELEVANT PROJECTS

MedDB – Advanced Databases Project   **University of Notre Dame, Indiana**
Founder, Full Stack Developer   **January - May 2023**

- Developed using React, Flask, and PHP a web-based electronic medical records (EMR) system on an Apache server, leveraging an AWS EC2 instance for deployment
- Architected a robust relational database comprising 12 tables, optimizing data retrieval capabilities

BetND – Databases Project   **University of Notre Dame, Indiana**
Founder, Full Stack Developer   **September - December 2022**

- Brought together a team of 4 peers to launch an on-campus sports betting marketplace with 60+ daily active users
- Automated concurrent data extraction from over 15 web pages for real time odds and score updates
- Composed database with 8000+ entries across 7 tables for organized and efficient data manipulation/access using SQL
- Published a modern and user-intuitive multi-paged website with all relevant information using PHP, JavaScript, and Python

NBA Outcome Predictor – Data Structures Project   **University of Notre Dame, Indiana**
Founder, Backend Software Developer   **March - May 2022**

- Scraped and cleaned raw box score data to get 20+ stats for over 7300 games over the past 6 NBA seasons utilizing Python (Pandas, NumPy) into a CSV file
- Created a machine learning neural network using PyTorch to predict outcome of NBA games with >74% accuracy
- Scheduled data extraction process for any games played in the future through 24hr timers to check for new game information

Robotic Football Club   **University of Notre Dame, Indiana**
Software Lead   **September 2021 – May 2022**

- Analyzed team feedback to implement skill moves and integrate ball security mechanisms for the "running back" by communicating between servo motors and a PS4 remote with unnoticeable latency
- Redesigned robot to be more structurally sound using mathematical concepts and be the fastest robot in the league

CS4 Good – Council on Aging of Elkhart County   **University of Notre Dame, Indiana**
Front End Software Developer   **September - December 2021**

- Redesigned spreadsheet with 10000+ data points to allow for the access and input of data via user-friendly forms which utilized filtering mechanisms, reducing previous required upkeep by upwards of 65%

Interests

Physical Fitness | Boxing | Hacking | Financial Markets | Kiteboarding | Reading | Settlers of Catan | Ice Cream