Sead Nikšić

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https://seadniksic.com

An aspiring computer engineer with the goal of solving problems in health care, robotics, and related fields.

Able to begin work May 2023 | Cumulative GPA: 3.52

Related Experience

JANUARY 2020 – AUGUST 2022

CO-OP SOFTWARE ENGINEER, PHILIPS RESPIRONICS

- Worked on tooling, research, and analysis related to the sizing of CPAP wearable products.
- Introduced algorithmic improvements to the sizing. This included training, evaluating, and deploying different machine learning models (off the shelf and custom) for performance gains of up to 20% in the pipeline.
- Built and modified full stack applications for research use (React, Node+ Express, SQLite, Docker, AWS).
- Performed data analysis in Python (numpy, pandas, matplotlib, etc.) and Excel (custom macros), to glean insights from data and expose underlying trends.
- Interfaced with hardware API to control 3D cameras (Bellus3D) and communicated with support team to improve it.

MAY 2020 – AUGUST 2020

RESEARCHER, UNIVERSITY OF PITTSBURGH, DEPT. OF BIOMEDICAL INFORMATICS

- Worked on research related to segmentation and analysis of histopathological images.
- Created a Python library to patch gigapixel images and generate segmentation masks, as well as trained off-the-shelf deep learning models (UNet, etc.), and evaluated their performance (PyTorch, Seaborn, etc.).
- Trained machine learning models on remote cluster and monitored progress / performance via Tensorboard and remote ssh access. Also wrote a Python module to easily access sensitive training data on remote server.

MAY 2019 – AUGUST 2019

SOFTWARE ENGINEERING INTERN, CARNEGIE ROBOTICS, LLC.

- Developed a web app for internal use to share and analyze the output of data collection logs.
- This was written in vanilla JavaScript, HTML, and CSS. The server used a SQL database to store log files, with which the application's backend (a Python "bottle" app) interfaced.
- Wrote various scripts to crawl through the logs and run analyses, exporting the results to a spreadsheet.

JUNE 2018 – AUGUST 2018

SYSTEMS ENGINEERING INTERN, CARNEGIE ROBOTICS, LLC.

- Worked on and tested a car-mounted system that collected inertial and GPS data from a variety of sensors.
- Drove the car on a predetermined path for data collection and performed troubleshooting.
- Performed data analysis by parsing through logs and graphing various metrics (i.e. GPS coverage over time) using Python scripts I wrote.

Education

AUGUST 2018 – SPRING 2023

COMPUTER ENGINEERING MAJOR, UNIVERSITY OF PITTSBURGH HONORS COLLEGE

- One year of general engineering courses, including Physics, Chemistry, and Engineering Analysis.
- Three years of major specific classes such as Data Structures and Algorithms, Circuits, Computer Organization, Signals and Systems, and Junior / Senior Design.

Skills

- Python, JavaScript, C/C++
- Machine Learning Theory and Implementation (PyTorch, SKlearn, etc.)
- Data Analysis (Python, Excel, Matlab, SQL / PostgreSQL)
- Computer Engineering Fundamentals (algorithms and data structures, digital logic, circuits, etc)
- Full Stack Development (Node, Express, React, Docker…)
- Math (Calculus, Differential Equations, Linear Algebra)
- Microcontrollers (IMXRT1062, ATMega 2560)
- PCB design in Altium
- Basic SolidWorks CAD design
- Clear and Effective Communication