Caleb Patton

Senior in Computer Engineering
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Portfolio Websites
cap099.github.io
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Education

University of Illinois at Urbana-Champaign
August 2018 - May 2022
Bachelor of Science, Computer Engineering
Spring 2021 GPA: 3.77/4.0

Top Skills

Python, Machine Learning, Neural Networks, Robotics, ROS, Webots, OpenCV, C/C++, Statistics

Professional Experience

Brunswick Corporation, Champaign, Illinois — *Robotics Intern*

February 2021 - December 2021

- Developed a marine obstacle detection system in Python that combined the outputs of 4 Machine Learning models using Sensor Fusion techniques and ROS
- Implemented object detection and SLAM algorithms on educational robotic platforms such as Turtlebot3 and Amazon DeepRacer using LiDAR Sensors and Cameras
- Contributed to the development of a Computer Vision/Machine Learning pipeline for autonomous boating by overseeing initial trials of data collection, data labeling and model selection
- Developed software for autonomous boating simulations using the CGAL library and Unreal Engine in C++

Xaptum Inc, Chicago, IL — *Software Engineering Intern*

January 2020 - August 2020

- Prototyped an Anomaly Detection/Notification system using Machine Learning and Erlang
- Built a REST API to initialize thousands of IoT Devices on Xaptum's Network using rebar3
- Presented analysis of anomalous connection events to supervisor using data visualizations bi-weekly

Altamont Company, Thomasboro, IL — *Machine Learning Intern*

Summer 2018, Summer 2019, Summer 2020

- Contributed to the development of a static site generator using Python, Flask and SQLAlchemy
- Trained an ensemble of Deep Learning Networks to map 10,000+ product images to their corresponding part numbers
- Implemented production tracking system on industrial CNC machines

Select Personal Projects

Jetson Nano Autonomous Vehicle (ROS, Python, PyTorch)

Personal Portfolio Website (React.js)

Haircut Classifier (PyTorch)