

# 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  
Fall 2021 GPA: 3.73/4.0

## Top Skills

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

## Professional Experience

### **Brunswick Corporation**, Champaign, Illinois — *Robotics Intern*

February 2021 - Present

- 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
- 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)