Joshua Field

https://joshafield.com

626.616.6320 ☎
joshfield99@gmail.com ✉
github.com/joshField
linkedin.com/in/joshafield

Education

Northeastern University | Candidate for BS, MS in Computer Engineering
Boston, MA

GPA: 3.81 | **Graduation Date:** May 2022 (5th Year)
Courses: Mobile & Assistive Robotics | Parallel Processing | AI | Machine Learning | Robotics Sensing & Navigation | Object Oriented Design | Computer Vision
Activities: Northeastern Unmanned Aerial Vehicles (Founding Member)
Awards: Dean's List | NASA Space Apps Hackathon - Boston (1st Place) | Eagle Scout

Experience

Amazon Robotics | Software Development Engineering Co-op   Jan '21 - Jun '21
Boston, MA | Python, Java, AWS, Typescript
- Developed a package singulation detection solution, using Tensorflow to classify images of packages
- Fully integrated the project with AWS (Sagemaker, GreengrassV2, Lambda, Cloudwatch)

California Institute of Technology | Software Engineering Intern   Summer '18, '19 & '20
Pasadena, CA | Python, Java, AWS, Arduino, SQLite
- Developed a smart maintenance sensor network that monitors the treatment of waste water using an Arduino & Raspberry Pi the remaining useful life, and most likely root cause of a given failure
- Implemented supervised predictive maintenance classification and unsupervised anomaly detection models
- Coded an Android app to monitor the sensor network with a backend of SQLite & Amazon Web Services (DynamoDB, IoT, Cognito, Lambda, SNS)

Scientific Systems Company Inc. | Software Co-op (Autonomy Group)   Jan '19 -Jun '19
Woburn, MA | C++, Python, MATLAB
- Developed collaborative autonomy software for path planning missions and Multi-UAV RF localization, focusing on algorithm development and simulation testing
- Created a graphical interface to visualize simulation log output using wxPython

Skills

Languages: C++, Python, MATLAB, Java **Familiar with:** C, Typescript
Applications: ROS/ROS2, Gazebo, Unreal Engine, Android Studio, AWS, Unity, SQLite

Projects

AerospaceNU | NUAV Software Lead   '19 - Present
Python, C++, ROS2
- Created a complete Behavior Tree library for mission planning
- Developed an autonomous platform with ROS & PX4 to perform complex missions
- Created an object classifier with a YOLOv3 architecture to recognize flight gates in the AlphaPilot competition

DeepFlight | CS4100   Dec '20
Python, Unreal Engine
- Developed a double DQN to train a UAV to fly through an obstacle course given depth images
- Used reinforcement learning environment with OpenAI Gym and Tensorflow