

# Toby McGuire

Port Orange, FL 32129 | 630-890-0680 | tobymcguire461@gmail.com

## SKILLS

---

**Programming Languages:** C, C#, C++, Java, Python

**Software Development & Tools:** AWS, Blender, Docker, Git, Linux, Unity, Unreal Engine, Visual Studio, VS Code

**Machine Learning & Data Science:** numPy, TensorFlow, YoloV5, Factory CLI, Github Copilot

## CERTIFICATIONS

---

**Secret Security Clearance - Present**

**AWS Certified Cloud Practitioner - February 2025**

## EXPERIENCE

---

**The Boeing Company**

**Florida**

*Software Engineer IC2*

- Developed automated full level integration tests, ensuring vehicle code met project requirements and reducing manual verification efforts.
- Designed custom automation tools which eliminated months of repetitive work and cut the amount of rework by over 50%.
- Selected by leadership to join multiple high priority cross functional teams and worked across several subsystems and infrastructure code.

**Nauticus Robotics**

**Houston, Texas**

*Software Engineer*

- Developed a Blender based data generation tool, producing 30,000+ labeled data points for machine learning underwater object detection.
- Automated a data pipeline, improving processing efficiency by 90%, allowing overnight batch processing of stereo image pairs into 3D models.
- Implemented conic reconstruction algorithms from the research paper applying computer vision techniques to real world scenarios.

**Ohio State Underwater Robotics**

**Columbus, Ohio**

*Software Engineer*

- Created a Unity simulation that takes in real time data from the system computers to visualize different navigation behaviors, and validate its perception.
- Utilized different machine learning techniques to automatically label thousands of data points, allowing the robot to recognize the distance and rotation of objects in cloudy water.

## PROJECTS

---

**SUMO - Video Game**

*Creator, Lead Game Developer*

- Developed a multiplayer game using Unity and C# with .NET Framework 4.7.1, incorporating Steamworks for network management and player authentication.
- Utilized serialization, custom data structures, and data salting to create encrypted persistent data storage.
- Contributed to FishNetworking, an open source repository that powered the game's multiplayer.

## EDUCATION

---

**The Ohio State University, College of Engineering**

**Columbus, Ohio**

B.S in Computer Science and Engineering | GPA: 3.84 | Specialization in Artificial Intelligence