Blake McHale

Software Engineer

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Education

Northeastern University — *Boston, MA*

Candidate for Bachelor and Master of Science in Computer Engineering, GPA: 3.84 — *Expected May 2022*

- **Relevant Courses:** Robtics Sensing & Navigation | Machine Learning | Statistics & Stochastic Processes | Object Oriented Design | Algorithms
- **Activities:** Northeastern Unmanned Aerial Vehicles (Founding Member) | Colleges Against Cancer
- **Awards:** Honors Program, Eta Kappa Nu, Eagle Scout, Dean's Scholarship, Dean's List, NASA International Space Apps Challenge Boston (1st place)

Skills

Languages	C++, Python, MATLAB, Java, Javascript | Familar with VBA, HTML, CSS, SQL, C#
Computer Applications	ROS/ROS2, Gazebo, Unreal Engine, Unity, SolidWorks, Excel, Access

Experience

MITRE — *Bedford, MA*

PNT Platform Software Intern | Python — *June 2020 - Aug. 2020*

- Added continuous integration and online documentation for signal propagation simulation internal python package
- Implemented path loss models that utilized terrain maps
- Extended positioning methods to support various earth models

Naval Submarine Medical Research Laboratory — *Groton, CT*

NREIP Software Intern | Python — *June 2019 - Aug. 2019*

- Worked on using machine learning to predict reaction time in sleep deprived individuals
- Utilized TensorFlow to construct a neural network framework for analyzing model performance
- Tested and evaluated results of various machine learning techniques

Scientific Systems Company Incorporated — *Woburn, MA*

Simulations Engineering Co-op (Active Perception Group) | C++, Python, Javascript — *Jan. 2019 - June 2019*

- Built environments with artificially intelligent characters in Unreal Engine
- Designed software for testing and simulating UAVs actions with AirSim
- Tested and developed control systems for managing multiple drones within subterranean environments in the Gazebo simulation environment
- Constructed base station interface for interacting with robot through ROS for subterranean competition

Supervisor of Shipbuilding Groton — *Groton, CT*

Student Trainee (Office Automation) | SQL, VBA — *June 2018 - Aug. 2018*

- Developed, designed, optimized, and secured database containing PII
- Wrote programs that helped optimize flow of NOFORN, confidential, and unofficial documents
- Attended arrangement meetings and engaged with engineers discussing submarine systems

Projects

AerospaceNU - NUAV Software

Project Lead | C++, Python — *June 2019 - Present*

- Teaching new members and students how to use ROS to control rover and drone autonomously
- Leading design of rover and drone for simulation in Gazebo
- Designing drone for identifying rockets in a field using radio signal strength indicator

AerospaceNU - NUAV Alpha Pilot Competition

Project Lead | Python — *Jan. 2019 - June 2019*

- Created image classifier with YOLO architecture
- Designed controls and localization system for UAV in FlightGoggles simulator