Blake McHale

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EDUCATION

Northeastern University, Boston, MA

Candidate for Bachelor and Master of Science in Computer Engineering — Expected May 2022
Pursuing Minor in Robotics and Math — Current GPA: 3.8

Relevant Courses: Robotics Sensing and Navigation, Intro. to Machine Learning, Statistics & Stochastic Processes, Object Oriented Design, Algorithms, Embedded Robotics

Activities: AIAA Northeastern Unmanned Aerial Vehicles (Project Lead/Founding member), Colleges Against Cancer

Awards: Honors Program, Eagle Scout, Dean's Scholarship, Dean's List, NASA International Space Apps Challenge Boston (1st place)

SKILLS

Computer Applications: Unreal Engine, Gazebo, Unity, SolidWorks, Simulink, Excel, Access
Programming: C++, Python, JavaScript, Java, VBA | Familiar with MATLAB, HTML, CSS, SQL, C#

WORK EXPERIENCE

Naval Submarine Medical Research Laboratory, Groton, CT — Jun'19 – Aug'19
NREIP Software Intern | Python

- 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 — Jan'19 – Jun'19
Simulation Engineering Co-op (Active Perception Group) | C++, Python, JavaScript

- 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 — Jun'18 – Aug'18
Student Trainee (Office Automation) | SQL, VBA

- 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 — Jun'19 – Present
Project Lead, Member | C++, Python

- 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 — Jan'19 – May'19
Project Lead | Python

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

Crash Course, Embedded Robotics — Sept'18 – Dec'18
C++

- Created obstacle avoidance game drawn with ASCII characters in terminal
- Coded interface between the user's wiimote and ZedBoard over Bluetooth
- Maintained details within game such as player score and lives

VOLUNTEER EXPERIENCE

Palestra, Ledyard High School, Ledyard, CT — Fall 2015 – Spring 2017
President

- Race Director for the *Colonel Classic 5k for Conor* (organized and managed donations from businesses for the event, raised $7000, also created a scholarship fund)

INTERESTS

Soccer, basketball, tennis, running, hiking, climbing, singing, and playing guitar