Bradley R. Selee

bselee415@gmail.com | Charlotte, NC | 704-936-7679 | bradford415

Education

Master of Science in Intelligent Systems / Clemson University **January 2022 – May 2023**
College of Engineering, Computing and Applied Sciences
- GPA: 4.00

Bachelor of Science in Computer Engineering / Clemson University **August 2016 – May 2021**
College of Engineering, Computing and Applied Sciences
- GPA: 3.65

Experience

Graduate Research in Intelligent Systems **January 2022 – Present**
Supervisor: Doctor Melissa Smith
- Implemented SwiftNet semantic segmentation model in PyTorch and loaded with ONNX Runtime to increase the inference speed of our segmentation pipeline from 2 frames per second (fps) to 20 fps
- Trained DeepLabV3 segmentation model in PyTorch on off-road terrain datasets to achieve 66.4% mean intersection over union (mIoU) for use in an autonomous Husky Robot
- Teach Creative Inquiry class that introduces the basics of machine learning which covers visualizing data, regression, classification, multilayer perceptrons, and convolutional neural networks using scikit-learn, Pandas, and TensorFlow

Undergraduate Research - Computational Biology **January 2020 – January 2022**
Supervisor: Doctor F. Alex Feltus
- Apply concepts of computational biology to construct a multilayer perceptron neural network, written in PyTorch, to classify tissue samples using biological features such as gene expression and genotypes

Co-op Test Engineer at Itron **August 2018 – May 2021**
- Built and maintained ASP.NET MVC 5 Web Application with C# and SQL using Visual Studio IDE allowing engineers to efficiently move meters throughout the meter farm
- Connected Web Application to Microsoft SQL Server to accurately represent the meter farm in the database and linked application with Git Version Control
- Created windows service to monitor XML files and email technicians/engineers upon job completion
- Gave in-depth presentation of co-op work to division leader

IEEE Robotics – Autonomous Robot Navigation **August 2017 – May 2019**
- Goal: design, build, and program an autonomous robot to navigate field and complete desired tasks with no human contact
- Utilized C++ to program sensors/motors with Arduino Microcontroller and Raspberry Pi
- Recognized basic objects with computer vision using OpenCV
- Placed 5th out of 44 teams in IEEE SoutheastCon 2019 Hardware Competition

Supplemental Instruction - Calculus I & II **August 2017 – May 2018**
- Plan and lead review sessions on class material twice a week at Tri-County Technical College

Projects and Events

Active Contours Computer Vision GUI
- Created a Python GUI that implements the active contour computer vision algorithm to segment complex images
- Exclusively uses the Tkinter, for the GUI, and Python's Image Library, to get pixel data

Events
- Clemson Hackathon 2017, IEEEXtreme14.0