Lincoln Kinley

1330 Boylston St. Apt. 414 ♦ Boston, MA 02215 ♦ kinley.l@northeastern.edu ♦ (217) 553-0551 ♦ lincolnkinley.github.io

Education

Northeastern University, Boston, MA September 2019 – August 2021 (Expected)
Candidate for Masters of Science in Robotics GPA: 3.90/4
Concentration in Electrical and Computer Engineering

Southern Illinois University Carbondale, Carbondale, IL May 2019
Honors Engineering Dual Degree Program: Electrical Engineering and Computer Engineering GPA: 3.79/4
Minor in Computer Science
Honors: *Magna Cum Laude*, College of Engineering Outstanding Student Leadership Award

Skills

Programming: C, C++, C#, Python, BASH, Java, MATLAB, HTML5, Verilog
Libraries, Frameworks, and Development Kits: ROS, OpenCV, Socket, MPI, Pthreads, Tensorflow,
Machine Shop Processes: Mill, Lathe, Band saw, Drill press, CNC, Soldering iron, Hand tools, Hand saws
Software Tools: Git, Docker, JetBrains IDEs, Visual Studio IDE, Xilinx ISE, MS Office, GNU/Linux, Windows OS, OSX
CAD, CAM, and 3D Printing Software: SolidWorks, HSMWorks, Autodesk Inventor, Slic3r, Simplify 3D
Embedded Devices: Arduino, Raspberry Pi, Asus Tinkerboard, Odroid XU4, NVIDIA Jetson TX2, Xilinx FPGA, Pixhawk PX4

Work Experience

Northeastern University Field Robotics Laboratory, Boston, MA January 2021 – Present
Computer Vision and Robotics Researcher
- Developing visual inertial odometry methods for airborne robots equipped with thermal cameras to navigate in environments where traditional cameras would fail
- Wrote a ROS node with a driver and library for controlling the FLIR Lepton thermal camera over USB in C++
- Created tools to contrast and detect visual features in 14-bit radiometric images in Python

MORSE Corp., Cambridge, MA May 2020 – December 2020
Autonomy and Robotics Software Engineer for Aerospace Applications Co-op
- Designed and implemented a driver and modular library for wireless communication platforms in C++ with C compatibility
- Ran hardware-in-the-loop simulations on aerospace robots to validate and debug changes in software
- Developed and deployed portable cross platform software using Docker

Anagnostopoulos Research Group, Carbondale, IL May 2018 – May 2019
Edge Computing and Computer Vision Researcher
- Co-Authored "Edge-First Resource Management for Video-based Applications: A Face Detection Use-case" which was submitted to the IEEE Embedded Systems Letters and is currently in Early Access
- Devised methods to run OpenCV algorithms efficiently in a low power environment using Python
- Implemented neural networks using Tensorflow on the Intel Movidius Neural Compute Stick

Product Safety Consulting Inc., Bensenville, IL June 2017 – August 2017
Compliance Engineering Intern
- Conducted safety testing on a variety of products including consumer, industrial, and military applications
- Applied Underwriters Laboratories safety standards for LED lighting and other manufactured products
- Managed collection of data and compilation of final comprehensive analysis reports

Leadership / Professional Memberships / Activities

SIU Robotics, Association of Technology, Management, and Applied Engineering August 2015 – May 2019
- Project Leader on the robot "Absaluki 3: Revenge of the Absaluki", which won first place at Robobrawl 2019, hosted by the University of Illinois Urbana-Champaign
- President during the 2017 Academic Year. Increased membership by 60% from 25 to 40 members
- Lead programmer for the robot "Winston" that won first place at 2017 ATMAE National Robotics Competition in Cincinnati, Ohio
- Project Leader on the Senior Design Team in 2017, which built the robot that won first place at the Midwestern Robotics Design Competition at the University of Illinois at Urbana-Champaign

SIUC Undergraduate Student Government August 2017 – May 2018
Senator - College of Engineering, Funding Board Representative
- Elected as one of two Senators to represent the College of Engineering
- Managed and approved budget requests of student organizations
- Proposed the successful approval of legislation for the operational funding of Engineering Student Council

SIUC STEM Leadership Development Program August 2016 – May 2018
- Selected as one of five members from the Engineering Department to serve as a Senior Mentor
- Planned and executed a two-day leadership training event for 80 students
- Presented and led multiple leadership labs on the fundamentals of leadership such as Covey's Seven Habits, The Leadership Challenge, and Effective Communications