

Lincoln Kinley

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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

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 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 Experiences

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 a wide array of environments
- 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-Authoring “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

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 50% 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