Brennan Miller-Klugman

brennan.miller_klugman@tufts.edu | Medford, MA
www.linkedin.com/in/brennan-miller-klugman | https://github.com/brennanmk

EDUCATION

Tufts University | Medford, MA Expected August 2028
PhD, Computer Science

Tufts University | Medford, MA Expected August 2024
MSc, Computer Science

Wentworth Institute of Technology | Boston, MA August 2022
Bachelor of Science in Computer Engineering

SKILLS

Software: Verilog, MATLAB, SolidWorks, Fusion360, ROS, Flask
Languages: Java, Python, C, C++, C#, x86 Assembly
Operating Systems: Linux, Windows

EXPERIENCE

Woods Hole Oceanographic Institute | Woods Hole, MA
AOPE Co-op September 2021 – January 2022

- Developed various ROS utilities including an application to transfer files across the WHOI Micromodem-2
- Used Flask to develop web interfaces to display information from databases
- Created a CLI application uses Curses to provide a simpler way to run ROS command
- Deployed Ubuntu based CI server to build firmware on regular intervals using docker containers
- Wrote documentation explaining the setup of CI
- Used JTAG to flash updated firmware onto boards

Wentworth Institute of Technology | Boston, MA
Research Assistant December 2021 – April 2021

- Designed and constructed a small robot to be used to learn code by elementary school students
- Selected parts including an ultrasonic sensor, motors, and a motor driver
- Used Python and HTML to create a web interface utilizing the Flask framework
- Modeled and 3D printed a chassis for the robot using Fusion 360
- Wrote a comprehensive assembly guide and lesson plan for the robot

Priority 5 Holdings | Needham, MA
Software Developer April 2020 – August 2020

- Used Python and Rest API's to Create data integration for customer deployment
- Developed a Python script to load historical data for a customer
- Wrote a comprehensive technical user guide for customers
- Built Python code using the PDFMiner library to parse data from PDF files
- Provided technical support to the customer support team to better address customer issues

CVS Health | Orleans, MA
Shift Supervisor July 2016 – August 2019

- Managed a staff of up to 3 people to complete daily functions such as assisting customers or organizing the store
- Oversaw the unloading of the weekly delivery and interfaced with employees to effectively put away the stock
- Handled customer relations issues in accordance with company policy and promote a positive shopping experience

PROJECTS

Underwater Remotely Operated Vehicle (ROV) | IEEE September 2019-Present

- Developed ROS architecture in Python to communicate with sensors, hardware, and motors
- Programming with PyQt to create a GUI to interface with the ROV
- Interfaced with I2C Sensors, UART and others
- Installed and configured OpenWrt on a Raspberry Pi 3 to allow wireless communication with the ROV

Home Server Lab September 2018-Present

- Deployed multiple utilities including Heimdall and Nextcloud using Docker
- Deployed a remote development server running Ubuntu Server
- Installed an 8U blade enclosure into 22U server rack
- Constructed both RAID 0 and RAID 1 arrays to provide redundancy or performance improvements

Minecraft For Education | Intro to Engineering January 2019-April 2019

- Worked with Java code to create custom interactions within the game in a team of 2
- Created technical documentation so that the project could be replicated by students
- Deployed a Minecraft game server using Ubuntu Server