Nick Linthacum

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nicklinthacum.com

EDUCATION

Gonzaga University (Spokane, WA)   *Graduation: May 2024*
Bachelor of Science, Computer Engineering (Minor in Entrepreneurial Leadership)
- GPA: 4.00
- President's List
- Honors Program Member
- Trustee Scholarship

Archbishop Mitty High School (San Jose, CA)   *2016 – 2020*
- Cumulative GPA: 4.43
- National AP Scholar

TECHNICAL SKILLS

Software: C++, Python, Git, ROS

Hardware: Verilog, EAGLE PCB design, Arduino, Raspberry Pi, electronic test equipment, soldering

PRODUCTS DEVELOPED

Robotic Arm | Gonzaga Hackathon | Fall 2021
- 1st place overall out of 30 teams at Gonzaga University hackathon
- Designed 3-axis robotic arm programmed in C++ and controlled by an Arduino
- Manual control using sensor input from joysticks and autonomous control using inverse kinematics
- Utilized debugging tools like Programmable DC Power Supply, Oscilloscope, and Multimeter

Dorm Room Thermostat | 6-week project | Spring 2021
- Computerized control of room climate to within 1 degree by designing a thermostat instead of relying on unreliable central heating and cooling with temperature range of +/- 10 degrees
- Reverse engineered an OEM remote to control a fan using an infrared LED and an Arduino
- Programmed an OLED display in C++ to display the ambient temperature and allow user to set a desired temperature
- Designed PCB using EAGLE, fabricated, assembled, and tested final product

Wine Fridge Temp Text Alerts | 3-week project | Summer 2021
- Saved over $1000 in wine spoilage by building device that sends alerts of fridge malfunction
- Developed Python scripts running on Raspberry Pi to read thermocouple and programmatically react
- Published sensor data to server which interfaced with Twilio
- Used Twilio API to send alerts from local server and handle user text query

EXPERIENCE

Embedded Team Lead | Robotic Submarine Club | Spokane, WA   *September 2020 – Present*
- Placed 5th out of 65 in sensor design optimization in competition and grew team size by 200% from 6 to 12 as leader
- Collaborate with mechanical and electrical subsystems to optimize design for torpedo launcher design and integration
- Program torpedo launcher with onboard computer using C++
- Develop proof of concept for machine learning utilization on the robot

Undergraduate Researcher (Paid) | Computer Science and Math Dept. | Spokane, WA   *January 2021 – Present*
- Published research paper as a result of creative application of data structures in graph theory
- Created proofs and designed graphs as part of student and professor collaboration
- Presenting research at global math conference in January 2022

Team Consultant | New Venture Lab | Spokane, WA   *September – December 2020*
- Delivered findings of 100 surgeon study to client, resulting in increase from $10,000 to $15,000 on product development
- Conducted supply-side research on developing technologies in the biomedical engineering industry
- Aggregated, interpreted, and presented findings of research to client and advisors