

KAI NAKAMURA

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SUMMARY

I'm a passionate double-major student studying computer science and robotics engineering. I am a hardworking team member and a strong leader.

EDUCATION

Worcester Polytechnic Institute, GPA: 4.0 | Worcester, MA

Graduating 2025

- Pursuing a bachelor's degree in computer science and a bachelor's degree in robotics engineering

Raisbeck Aviation High School, GPA: 4.0 | Tukwila, WA

Graduated 2021

- Valedictorian of the 2021 Class

PROFESSIONAL EXPERIENCE

Coding Instructor, iCode | Bellevue, WA

Summer 2022 & 2023

- Taught students programming and engineering concepts in week-long classes
- Provided meaningful feedback on class materials and student dynamics in weekly status reports to parents
- Courses taught include: Vex Robotics, Lego Robotics, Drone Artificial Intelligence, Digital Art, Roblox Game Development, Construct 3 Advanced Game Design, Java Programming

Web Designer, Seattle Sounders Alliance Council | Remote

June – Sept. 2021

- Redesigned UI and restructured organization for a WordPress site to improve readability and navigation

Web Designer, Seattle Society of Flight Test Engineers | Tukwila, WA

March – July 2018

- Collaborated with a small group of students and met biweekly with Boeing Engineers to create a custom WordPress theme using HTML, CSS, JavaScript, and PHP

PROJECTS

Pick-and-Place Robotic Arm, MATLAB | kainakamura.com/project/rbe3001

Sept. – Oct. 2023

- Programmed a 4-DOF serial robotic manipulator in MATLAB to pick up and sort colored objects
- Implemented forward and inverse kinematics, trajectory generation, and a robust computer vision system

Multi-Robot Collaboration, C++ | kainakamura.com/project/rbe2002

March – May 2022

- Programmed and assembled three robots to work together to escape from a randomized grid-based maze
- Established inter-robot communication over Wi-Fi using ESP32 microcontrollers with MQTT messaging

Solar Panel Replacer, C++, SolidWorks | kainakamura.com/project/rbe2001

Jan. – March 2022

- Designed and manufactured a robot to autonomously replace solar panels on a miniature house
- Utilized SolidWorks to create a four-bar linkage system, gripper mechanism, and compound gear box

ACTIVITIES

Web-Tech Chair, Sigma Pi Fraternity | sigmapigammaiota.org

Feb. 2023 – Present

- Responsible for maintaining and updating the website of the Gamma Iota chapter
- Organize and lead weekly committee meetings to discuss key initiatives and educate new members

Lead Programmer, FIRST Robotics Competition Team | Seattle, WA

Sept. 2017 – June 2021

- Facilitated software development for Skunk Works Robotics, FRC Team 1983
- Responsible for mentoring new programmers and conducting regular code reviews

SKILLS

Proficient in the following programming languages:

Java, C, C++, Python, JavaScript, TypeScript, HTML & CSS, MATLAB, SQL, R

Additional Skills:

Git, Vim, Arduino, Raspberry Pi, Linux, Autodesk Inventor, React, Next.js, Public Speaking, WPM: 102