Jack Wei

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Education

Olin College of Engineering, Needham MA May 2028
Engineering Computing (CS)
Relevant Coursework: Linear Algebra, Math Modeling & Simulation

Newton South High School, Newton MA June 2024
Relevant Coursework: AP Computer Science A *Unweighted GPA: 3.97/4.0*

Skills

Frontend: HTML/CSS, Javascript, Typescript, React, Nextjs, Vue, Jetpack Compose, Compose for Desktop, Kotlin Multiplatform, wxPython, Kivy, Java Swing, Shadcn
Backend: Java, Kotlin, JavaScript, Node.js, Python, Flask, C/C++, Firebase, OpenAPI, MySQL
Deployment: Git/GitHub, Bitbucket, Shell, Apache Maven, Gradle, Vercel

Experience

Network and Cyber Technologies Intern Jun 2024 - Aug 2024
RTX BBN Technology - *Cambridge, MA*
- Independently developed a responsive, cross-platform desktop UI using Kotlin and Compose for Desktop
- Drafted and implemented client-side and server-side API protocols using OpenAPI Specifications. Wrote a mock server using Python Flask for all function testing
- Spearheaded multiple UI design proposals to enhance User Experience, organized and led team design iteration meetings

Unmanned Aerial System Synthetic Aperture Radar (MIT BWSI) Jul 2023 - Aug 2023
- Programmed and optimized the back-projection algorithm on drone's detection radar in C++
- Coded radar signal collections and receiving. Created data analysis scripts and visualizations including 3D animation of drone's flight trajectories in Python
- Designed a GUI using wxPython for operations during drone flights and live display of real-time data

Ligerbots (FIRST Robotics Team 2877) | *Programming & Vision Lead* Sept 2020 - Jun 2024
- Architected, programmed, and tested team's competition robot from beginning within 6 weeks every year for 4 years. Led and mentored the programming team of ~20 members
- Researched software for Swerve drive system in Java. Implemented path simulations, trajectory planning, and autonomous path-following. Integrated DataLogging utility for electrical debugging and post-match analysis
- Developed computer vision algorithms using Python OpenCV to detect desired game pieces, and assist robot aligning & scoring without manual input

Honors

USA Computing Olympiad Gold Division Mar 2023
- Top 500 pre-college competitive programmers nationally

Google Kickstart 2022 Round C Ranked Top 2% globally Dec 2022

American Computer Science League Two-time National Finalist
- National Silver Medal in Intermediate Division May 2024
- National Bronze Medal in Senior Division May 2023