Arden Sentak

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Education

Stevens Institute of Technology Hoboken, NJ
Bachelor of Engineering in Computer Engineering *Sep. 2022 – May 2026*
GPA: 4.0
Honors: Stevens ECE Outstanding Award in Computer Engineering
Course Work: Computational Data Structures & Algorithms, Microprocessor Systems, Engineering Programming: Python, Electronic Circuits, Discrete Mathmatics, Design of Dynamical Systems, Modeling & Simulation

Work Experience

Systems Software Test Engineer Intern May 2025 – Aug. 2025
Lockheed Martin *Moorestown, NJ*

- Executed end-to-end hardware-software integration tests, troubleshooting complex system issues and performing detailed post-test data analysis to ensure test accuracy and validate system performance.
- Developed automated test scenarios to validate system functionality, enhancing test coverage and efficiency.
- Prepared test readiness reviews, test reports, and debriefs to document test outcomes and support clear customer communication.

Systems Software Test Engineer Intern May 2024 – Aug. 2024
Lockheed Martin *Moorestown, NJ*

- Spearheaded the implementation of Git for software-test databases by refactoring Perl and Python scripts to convert the databases from VSS to Git with all history being preserved.
- Designed and delivered Git training for several teams of 5-10 people, customizing workflows to individual team needs, which enhanced version control proficiency and boosted productivity.

Electronic Circuits Teaching Assistant Sep. 2024 – May 2025
Stevens Institute of Technology *Hoboken, NJ*

- Prepared and led weekly recitation sessions for 40 students, reinforcing concepts on MOSFET transistors, amplifiers, and circuit analysis.
- Evaluated student work, proctored exams, and provided guidance through Q&A to enhance understanding of electronic circuits.

Information Technology Intern June 2023 – August 2023
Lavner Education *Cherry Hill, NJ*

- Guided groups of 5-15 students in learning programming, engineering, and robotics skills by instructing daily lessons and providing hands-on assistance with educational projects.
- Taught week long camp courses in the following subjects: C++, Game Design, Robotics, Science Discoveries, All Girl's STEAM Education.

Projects

Recycle Sort: Binary Image Classifier | *Python, TypeScript* Apr. 2025 – May 2025

- Developed a binary image classifier using TensorFlow & Keras in Python to sort recyclable vs. non-recyclable items, which achieved 93% training accuracy & 82% validation accuracy on a dataset of 12,000 labelled images.
- Built a full-stack web app using Next.js & TypeScript with a FastAPI backend to handle image uploads and deliver real-time recyclability predictions, enabling practical deployment and user interaction.

Airplane Boarding Optimization Model | *OMNeT++, C++* Nov. 2024 – Dec. 2024

- Used C++ to develop three distinct computer simulation models for airplane boarding in OMNeT++.
- Analyzed simulation results using statistical methods to evaluate model performance and efficiency.

Autonomous Robot | *C++* Jan. 2023 – May 2023

- Collaborated with two team members to design a robot that navigates to specific target coordinates while maneuvering around any obstacles in its path.
- Used Arduino IDE to develop algorithms which programmed our robot to calculate a path then move to its current target. The robot would also recalculate its movement path if an obstacle obstructed the path.

Technical Skills

Programming: C++, Python, Java, MATLAB, JaveScript, HTML, CSS
Frameworks: React, React Native, Next.js, TensorFlow, FastAPI