

Engineering Portfolio: <https://sakurakokingsbury.github.io/portfolio/>

LinkedIn: [linkedin.com/in/sakurakokingsbury/](https://www.linkedin.com/in/sakurakokingsbury/)

TECHNICAL SKILLS

Software: SOLIDWORKS, ANSYS, Autodesk Fusion 360, Autodesk Maya
Programming: MATLAB, C++, Python, HTML, CSS
Technical: 3D Printing, Circuit Design, Soldering, Microcontrollers, Sensor Integration, Motor Control, Technical Drawing
IT/ Tools: Jira, Intune, Azure AD, Computer Hardware & BIOS Configuration
Languages: English (Native), Japanese (Fluent)
Certifications: CSWP - Certified SOLIDWORKS Professional (In Progress)

EDUCATION

Stevens Institute of Technology | Bachelor's Degree of Mechanical Engineering Hoboken, NJ | **2023 - Present**

- **Current GPA:** 3.5/4.0
 - **Awards:** Deans List, Edwin A. Stevens Scholarship, Martha Bayard Stevens Scholarship
 - **Relevant Coursework:** Dynamical Systems, Mechanics of Materials, Machine Components, Control Systems
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ENGINEERING PROJECTS

Interactive Robotic Pet

- Designing an interactive autonomous robotic system integrating DC motors, ultrasonic sensing, and microcontroller-based control for movement and environmental awareness
- Implementing emotional expression via LCD display, RGB LEDs, servo-actuated motion (ears/tail), and audio feedback
- Developing multi-modal interaction using buttons and photoresistors to trigger behavior (ie. eating, tricks, bark)
- Designing system architecture combining autonomous behavior (randomized state logic) with user-driven overrides to simulate dynamic personality
- Performing engineering analysis to guide design decisions, including shear stress evaluation of structural components, torque-based mobility constraints, and power consumption

Autonomous Navigation Robot

- Designed a custom 3D-printed chassis integrating sensors, control hardware, and drivetrain within strict constraints
- Developed an autonomous navigation system using a ESP8266 microcontroller, motor driver, and three ultrasonic sensors positioned at 45° for full-field obstacle detection
- Implemented path-planning and obstacle-avoidance logic in C++ using real-time data from a LiDAR-based MQTT system
- Integrated OLED display to visualize robot coordinates and navigation state during operation
- Achieved full navigation of obstacle course in 1 min 21 sec with zero collisions, meeting all performance constraints

Automatic Plant Watering System

- Led design and development of an Arduino-based automated irrigation system integrating soil moisture, temperature, humidity, and light sensors for real-time environmental monitoring
 - Developed closed-loop control system using servo-actuated valve based on sensor thresholds
 - Programmed microcontroller in C++ to collect and publish sensor data to an IoT server via MQTT at 10-second intervals
 - Developed sensor calibration and signal processing logic, including conversion of analog voltage to illuminance (lux) using exponential modeling
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EXPERIENCE

TS Imagine | Product / Systems Engineering Intern Manhattan, NY | **06/2025 - Present**

- Configured and deployed enterprise workstations, including hardware selection and installation, BIOS/TPM setup, OS imaging, and system provisioning
- Repaired and maintained data center hardware including PDU systems to ensure operational reliability
- Built and maintained asset tracking infrastructure using Jira Assets, improving visibility of hardware and system inventories
- Analyzed large-scale financial datasets for FX reconciliation, identifying discrepancies and validating calculations
- Developed client-facing technical documentation outlining system workflows and software usage