

Srikanth Aravinda Giovanni Schelbert

(319) 631-9522 | srikanthschelbert@gmail.com | <https://schelbert197.github.io/portfolio/>

EDUCATION

Northwestern University McCormick School of Engineering (Evanston, IL)

Expected Graduation Dec. 2024

Masters of Science in Robotics

GPA: 3.85/4.0

Recent Coursework: Embedded Systems (ROS2), Robotic Manipulation, Swarm Robotics, Dynamics and Simulation

Upcoming Coursework: Robotic Navigation and Sensing (SLAM, C++), Mechatronics (C), Machine Learning, Individual Project

University of Pittsburgh Swanson School of Engineering (Pittsburgh, PA)

Graduated Apr. 2020

Bachelor of Science in Mechanical Engineering

Minor in Chemical Engineering

RELEVANT PROJECTS

- 7-DOF Robotic Arm for Human-in-loop OCR Hangman Game using custom Python API (ROS2, MoveIt, OpenCV)
- KUKA youBot simulation with PI control in CoppeliaSim (Trajectory Planning, Controls)
- Robot Segregation Based on Brazil Nut effect (Distributed Control, Python)
- 2D "Dice in a box" Dynamics Simulator (Lagrangian Dynamics, SymPy)
- Reynold's Flocking for a Robot Swarm (Distributed Control, Python)
- Computer Vision Based Pen Grabber (OpenCV, Interbotix, ROS2)
- Maze Solving Algorithm using both Breadth-first and Depth-first Techniques (Path Planning, Pygame)
- Rapidly-exploring Random Tree (RRT) Algorithm (Matplotlib, Path Planning)
- Coding "Space Invaders" using Pygame (Python3, Pygame)
- Design of an Apparatus to Study Patella Fracture Repairs (Undergraduate Capstone)

RELEVANT WORK EXPERIENCE

Hitachi Rail STS (Pittsburgh, PA)

Jun. 2022 - Aug. 2023

Associate Hardware Engineer

- Reduced costs by \$10,000 through a root-cause analysis and redesign of LED signal thermal pads.
- Designed multiple hardware components for onboard and ground equipment reducing manufacturing costs by over 10%.
- Authored technical documentation resulting in the introduction of over 30 new revisions of railway parts over multiple projects.
- Designated work package lead researching 3D printing techniques to assess the business feasibility of introducing additive manufacturing to the repertoire of Hitachi STS.

Gather AI (Pittsburgh, PA)

Nov. 2020 - Jun. 2022

Deployment/Field-Ops Engineer

- Established optimized processes to deploy an autonomous drone in warehouses leading to more than \$0.75 million committed ARR.
- Interfaced with new pilot customers leading to more than 70% of pilot clients converting to full-time yearly contracts.
- Designed and fabricated multiple hardware components for an autonomous drone charge pad.
- Administered numerous QA tests using ROS, Rviz, and Python to further develop the scope and robustness of the robot's software, autonomy, hardware, and UI often leveraging my end-to-end knowledge of our product.
- Performed significant electrical testing, part sourcing, 3-D printing, and BOM curation for an autonomous drone chargepad.

RELEVANT SKILLS

Programming Languages: Python, C++ , C, BASH, MATLAB, HTML/XML

Robotics: ROS2/ROS, Ignition Gazebo, Robot kinematics, Motion Planning, MoveIt, OpenCV, AprilTags

Manufacturing: SolidWorks (CAD), Fusion 360 (CAD), SolidEdge (CAD), ANSYS, Machine Shop Tools

Software: Linux (shell script), Git, Github, Cmake, Unit test/Pytest, Microsoft Office Suite (including Excel), , MATLAB/Simulink, Overleaf (LaTeX), Google CoLab (Python), Atmel Studio ©

Soft Skills: Team Leadership, Coaching (6 years experience), Customer Interfacing and Communication, Systems Level Thinking