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
Current Coursework: Robotic Navigation and Sensing (SLAM, C++, CMake), Mechatronics (C), Machine Learning

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)
- Extended Kalman Filter SLAM From Scratch on Turtlebot3 (ROS2, CMake, C++, EKF)
- 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 of smart batteries using benchtop power supplies, multimeters, and load cells.

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