

Leon Aharonian

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Portfolio: <https://leonaharonian.github.io/Leon/index.html> | LinkedIn: <https://www.linkedin.com/in/leon-aharonian>

EDUCATION

Columbia University, School of Engineering, Last 2 Years GPA: 3.93/4.00, Overall GPA 3.72/4.00 New York, NY
B.S. Mechanical Engineering Major / Computer Science Minor, C.P. Davis Scholar Aug 2019 – May 2023

Bronx High School of Science Bronx, NY
High School Diploma, GPA: 96%, National Honor Society Aug 2015 – May 2019

SKILLS

Robotics: ABB Robot Studio, RoboDK, Universal Robots programming, ABB rapid programming, SolidWorks

CAD: SolidWorks, Fusion 360, Altair Inspire, Engineering Drawings, Photorealistic Rendering, Animation, FEA, GD&T

Software: ABB Rapid, Matlab, Python, Java, Arduino, HTML & CSS, C, Linux, Bash

Electronics: Soldering, Wire management, Arduino, Raspberry Pi, Servo Motors, Board design

Machine Shop: CNC: Water jet, Laser cutter, 3D printer, Mill, Lathe | Manual: Band Saw, Chop Saw, Belt Sander, Drill

EXPERIENCE

General Dynamics Electric Boat, Robotics Engineer, Quonset Point, RI & Groton, CT Jan 2024 – Present

- Led the integration of robotic technologies into production processes, ensuring alignment with operational goals and safety standards.
- Evaluated current systems and identified processes that could be implemented more safely and efficiently.
- Collaborated with vendors to design and implement cutting, grinding, and welding robots in a shipyard environment.
- Provided hands-on training and ongoing technical support to trade workers, enhancing the adoption and effective use of robotic systems.
- Designed custom torches and external axes for specialized applications, performed reach and feasibility studies, and optimized robot cell layouts utilizing RoboDK, RobotStudio, and SolidWorks.
- Managed relationships with global vendors (e.g., Universal Robots, ABB, Fanuc, Hypertherm, PushCorp) and stayed current on industry innovations by attending trade shows and tech expos.

Amazon Robotics, Robotics Deployment Engineer, Travel to Fulfillment Centers Aug 2024 – Jan 2024

- Liaised between engineering, operations, and other stakeholders to ensure timely, efficient product installation and seamless operational transitions.
- Designed and optimized critical system components to proactively resolve integration issues, allowing the system to be implemented in five locations across the US.
- Documented these improvements and relayed them back to the design team so they could add them to all future deployments of this technology.

Creative Machines Lab (CML) at Columbia, Research Student, New York, NY May 2022 – May 2023

- Designed and built a data pillow for elders to monitor vitals, alerting emergency contacts/911 if necessary [\[view here\]](#)

The Bronx High School of Science, CAD Instructor, Bronx, NY Jul 2020 – Aug 2020

- Designed the curriculum, home assignments, and final project in Fusion 360
- Gave all the lectures and checked the homework for a class of 35 students

Robotics and Rehabilitation (RoAR) Lab at Columbia, Research Student, New York, NY Jun 2017 – Apr 2019

- Created a comfortable Posture Monitoring Shirt (PoMS) that uses Machine Learning to generate posture-defining coordinate transforms based on electrical resistance from stretch sensors
- Awards: Regeneron STS Semi Finalist | NYCSEF Second Award in Engineering | NYCSEF Skanska Walsh Award | Sigma Xi 1st Place in Engineering | JSHS 2nd place | Winner of Milton Fisher Scholarship for Innovation and Creativity

FIRST Robotics, Group leader / Design & Construction Team Bronx, NY Sep 2015 – Apr 2019

- Collaborated with the team to design and build a competitive robot for the FRC challenge
- Trained new team members in all stages of robot development

COLUMBIA UNIVERSITY ENGINEERING PROJECTS

Debris Elimination and Management Instrument (DEMI) – Senior Design [\[view here\]](#) New York, NY

- Partnered with NASA, JPL to create a mechanism for capturing 10-30cm space debris

Automated Robotic Linkage Mechanism – Machine Design [\[view here\]](#) Fall 2022

- Worked in a team to design, build, and control a complex linkage mechanism
- Responsible for kinematic planning, creation of a detailed 3D model, and manufacturing.

Code Generated Designs – Digital Manufacturing [\[view here\]](#) Spring 2023

- Writing G-code for Food 3d printing • Generating embroidery (JEF) files with Matlab for CNC embroidery
- Topology optimization with Altair Inspire • Designed an acrylic desk organizer by writing an SVG file in Python

EagleJackson the walking Biped – Robotics Studio [\[view here\]](#) Spring 2022

- Designed, built, and programmed a walking bipedal robot