Joshua Davidov

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EDUCATION

The Cooper Union for the Advancement of Science and Art Manhattan, NY
Mechanical Engineering B.E. *September 2024 — May 2028*

- Cumulative GPA: 3.23/4.00 | Half Tuition Scholarship Recipient, Innovator Scholarship Recipient
- Relevant Coursework: The Evolving Universe, Remote Sensing Image Acquisition: Analysis and Application, Engineering Design and Problem Solving, Engineering Graphics, Principles of Design, Discrete Math, Linear Algebra, Differential Equations, Vector Calculus, Statics, Dynamics, Material Science, Introduction to Computer Science

PROJECT EXPERIENCE

Researcher June 2025 — Present
Mililab, Custom 3D Cast *Manhattan, NY*

- Designing and implementating a Python script to create a cast for any body part, ready for 3D printing with an input CAD model.
- Preparing scanned body parts for "meshification" using PyMeshLab, Blender Python API, NumPy, etc.
- Protoyping an open source mesh visualization and manipulation software using Figma and React Native.

The Cooper Union for the Advancement of Science and Art Manhattan, NY
Member, Suicide Burn Descent Simulator *November 2025 — December 2025*

- TBD

The Cooper Union for the Advancement of Science and Art Manhattan, NY
Member, 2D Finite Difference Solver *November 2025 — December 2025*

- TBD

Team Member September 2024 — December 2024
Urban Infrastructure, Project TOAD *Manhattan, NY*

- Engineering a compostion solution to prove a theory that oyster mushrooms can be utilized to break down forever plastics with a team of 5 engineers.
- Designed a piece of "living art" that accomodates specific substrates and their ideal growing conditions using Fusion360 and Solidworks.
- Presented our solution to the school in a yearly engineering design showcase.

Team Member Feburary 2025 — May 2025
Cooper Union, Piston Pandemonium *Manhattan, NY*

- Engineered a mechanical rectifier that transformed a motor's non-constant rotational motion into a gear with constant rotational motion.
- Developed a Python script to detect the position of a specifically colored sticker on the flywheel of the mechanical rectifier and computed its rotational velocity and acceleration using OpenCV and NumPy.

PROFESSIONAL EXPERIENCE

Tour Guide April 2025 — Present
The Cooper Union for the Advancement of Science and Art *Manhattan, NY*

- Conducting campus tours for groups of 10-20 prospective students and parents.
- Co-facilitating virtual information sessions for prospective students and parents with the Admissions team.

Design Sprint Intern June 2023 — August 2023
Google *Manhattan, NY*

- Selected for a summer intership as part of a New York City program for top high school and college students.
- Prototyped a marketing solution, 'Link & Reach', using the Design Sprint philosophy, aime to help small businesses reach their target audience.
- Constructed wireframes and potential web server architectures using Figma.
- Presented solution to a team of Google engineers for feedback and potential implementation.

Leadership Experience

Director   June 2023 — August 2023

The Cooper Union for the Advancement of Science and Art   *Manhattan, NY*

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Skills & Interests