

XANDER HUGHES

(650) 924-5202 ◊ ahughes@olin.edu ◊ xanderh.me

EDUCATION

Olin College of Engineering, Needham MA May 2023
BS in Mechanical Engineering. GPA: 3.9
Recipient of 4-year, 50% tuition merit scholarship

SKILLS

Software Inventor, SolidWorks CAD & FEA, Autodesk HSM, KiCad, ANSYS
Language C, MATLAB, Python, Rust, German
Physical CNC & Manual Mill, Lathe, Hand Tools, TIG & MIG Welding

EXPERIENCE

Bimotal Inc, Berkeley CA June - August 2022
Mechanical Engineering Intern

- Designed and built test fixture (dynamometer) for pedal-assist bicycle motors
- Designed, diagnosed, and assembled electric powertrains for micromobility products
- Specified press fit tolerances and performed statistical analysis of manufactured samples

Gener8 Inc, Sunnyvale CA June - August 2021
Mechanical Engineering Intern

- Designed and experimented on thermal test fixture for protein handling
- Prototyped, designed, and released flow cell assembly tool for protein assay instrument
- Designed fluid delivery stations for autosampler

June - August 2020
· Designed and released production test fixture for biotech instrument control boards
· Requested quotes, corrected drawings, and tracked revisions for \$230,000 in part orders
· Diagnosed and corrected mechanical problems in prototype manifold, motor systems

Olin Electric Motorsports (Formula SAE Electric) September 2019 - Present
Drivetrain Lead, Senior Engineer

- Redesigned chain tensioner to prevent critical failure mode
- Led design of experimental gearbox transmission
- Performed structural analysis of transmission components

ArtecFab, San Carlos CA August 2018 - June 2019
Designer / Machinist (Full-time Gap Year Job)

- Created CNC toolpaths and fixtures for small-volume manufacturing
- Operated and maintained CNC mills

Finite Element Modeling May 2019 - Present
Personal Project

- Wrote mesh generator and finite element matrix solver to simulate stress in parts
- Implemented linear algebra routines from scratch
- Future work includes graphic interface and CAD data input