Shaun FEDRICK
Physics / Mechanical Engineer | Master's Student

- in linkedin.com/in/shaun-fedrick-0b2069144
- github.com/sfedrick   Portfolio : https://bit.ly/31t1lk1
- +1 954 440 8279   @ sfedrick@seas.upenn.edu
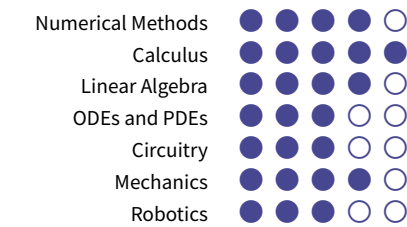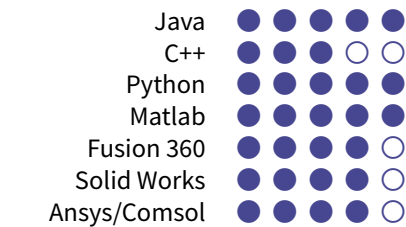- Philadelphia, PA   U.S. Citizen

UNIVERSITY of PENNSYLVANIA

EDUCATION

December 2021 January 2020	**University of Pennsylvania	Masters of Science in Engineering (M.S.E.), MECHANICAL ENGINEERING, PHL.**
	> Masters student, concentrating in Mechatronics

Engineering Technologies Rapid Prototyping Mechanics Stress and Failure Analysis Sensors Robotics Design

December 2020 August 2016	**Haverford College| Physics (B.S.) , HAVERFORD, PENNSYLVANIA , (3.1/4)**
	> Fluid dynamic research; Thesis : Touch Down of a Sphere in Viscoelastic Media
	> Questbridge Scholar, Chesick Scholar, and J. Henry Scattergood Scholarship recipient

Physics Analytical Thinking Problem Solving Coding Sensors Expirementation

PROFESSIONAL EXPERIENCE

May 2020 December 2018	**Fluid dynamic research	Student Researcher, HAVERFORD COLLEGE AND UNIVERSITY OF PENNSYLVANIA, Pennsylvania**
	> Analyzed mechanics of a probe using Matlab, Java, and Fiji
	> Designed apparatuses to observe lubrication forces in viscoelastic fluids
	> Fabricated apparatuses using a laser cutter, 3d printer, and machined parts
	> Characterized viscoelastic fluids using a rheometer

Matlab Solid Works Java Instron testing instruments Command line tools Fiji

May 2020 August 2019	**Physics Clinic|Student Tutor , HAVERFORD COLLEGE, Pennsylvania**
	Tutored students in intro physics this includes :
	> Free bodies, trajectories, gravity, rotational motion, and various other lessons in mechanics
	> Coulombs law, circuitry design, Maxwell's equations, and various other lessons in E&M

Circuitry Mechanics Analysis Teaching Communication

May 2019 August 2016	**Digital Scholarship	Digital Scholar , HAVERFORD COLLEGE, Pennsylvania**
	> Programming in Python, Django, and D3.js
	> Navigating through a server and managing it
	> Command line tools

Django Python D3.js Bootstrap Command line tools

</> PROGRAMMING AND TECHNOLOGIES

Java	● ● ● ● ●
C++	● ● ● ○ ○
Python	● ● ● ● ●
Matlab	● ● ● ● ●
Fusion 360	● ● ● ● ○
Solid Works	● ● ● ● ○
Ansys/Comsol	● ● ● ● ○

+ MATH AND PHYSICS

Numerical Methods	● ● ● ● ○
Calculus	● ● ● ● ●
Linear Algebra	● ● ● ● ○
ODEs and PDEs	● ● ● ○ ○
Circuitry	● ● ● ○ ○
Mechanics	● ● ● ● ○
Robotics	● ● ● ○ ○

≡ SKILLS

Coding and Technical Skills	Java, Matlab, Python, C++, Fusion 360, Solid Works
Fabrication and Design	Rapid prototyping, 3d printing, lasercutting, CNC milling
Math and Science	Mechanics, numerical methods, Calculus, ODEs, PDEs, Circuitry, Robotics
Technologies	Ros, Gazebo, Ansys, Comsol, Fiji, iMovie
Office Skills	Linux, Command Line Tools,Power Point, Git, Website Design, Excel, Word, LaTeX
Other	Teaching, Device Trouble Shooting