

# Jacob Fuher

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## Education

### Purdue University, West Lafayette, Graduate School

December 2024

- Master of Science in Electrical and Computer Engineering (GPA 3.3)

### University of Michigan, Ann Arbor, College of Engineering

December 2020

- Bachelor of Science in Electrical Engineering (GPA 3.3)

### Schoolcraft College

- Dual Enrolled and Guest Student (GPA 4.0)

## Skills

- MATLAB, KNIME, LabVIEW, Multisim, Minitab, SPSS, Fusion 360, SQL, HUE, HTML, C++, Power BI, Microsoft Office and Google Suite

## Relevant Coursework

- Graduate: Linear Algebra, Digital Signal Processing
- Optics, Photonics, Circuits, Signals and Systems, Electromagnetics, Semiconductor Devices
- Probabilistic Methods, Engineering Statistics, Analysis of Societal Networks, Controls
- Technical Communication for Electrical Engineers, Engineering Education, Ethics, Philosophy

## Employment

### General Motors | Data Analytics – Campaigns, Data Reports & GDM (TRACK)

March 2021-Present

- Develop, maintain, and execute large data requests and reports by utilizing Knime, SQL, Power BI, VBA, and Microsoft Office
- Managed and structured the migration of the Aftersales Release Catalog as part of the Power BI Technology Ambassadors Team
- Co-Led my TRACK Cohort by organizing our meetings and discussions

### University of Michigan | Undergraduate Researcher

Summer 2020

- Selected as participant in Summer Undergraduate Research in Engineering (SURE) Program
- Executed statistical analysis of large data sets using SPSS regarding students' perceptions and self-efficacy of entrepreneurship
- Compiled three large data sets for quantitative analysis
- Conducted a systematic literature review on the assessment and evaluation of experiential learning
- Developed curricula for a BME course incorporating self-directed, active, and collaborative learning

### University of Michigan | Summer Conference Assistant

Summer 2019

- Managed coordination and support of client groups/guests to ensure effective use of the building and resources while ensuring a pleasant stay for clients/guests

### iD Tech Camps | Instructor

Summer 2018

- Taught Minecraft Game Design, Unreal Engine Level Design, and Code Apps & Develop Games with C++ at the University of Michigan location to K-12 students

### Ford Motor Co. | Ford HSSTP Intern

Summer 2016

- Worked with system shifter team at Powertrain Engineering Driveline & Manufacturing
- Attended courses on manufacturing, engineering, and technology at the Research & Innovation Center

### Schoolcraft College | Kids on Campus Aide

Summer 2015-2017

- Taught Minecraft Modding, Web Design, and GameMaker to K-12 students

## Leadership

### Institute of Electrical and Electronics Engineers (IEEE)

2018-2021

- President, University of Michigan Student Branch 2020
- Previous positions held: VP Finance, VP operations, Membership Chair

## Research

### Transforming Engineering Education co-Laboratory (TEEL)

2020-Present

- Qualitative analysis of large data set regarding students' perceptions and self-efficacy of entrepreneurship
- Co-authoring papers on experiential learning in engineering education (listed under publications)

### Crowds and Machines (Croma) Lab

2019-2020

- Research on improving the quality of Senior CS students' code by collecting in-class data via a simple coding assignment and performing a subsequent qualitative analysis
- Provided feedback to and tested multiple HCI-focused projects

**Michigan Balloon Recovery and Satellite Testbed (MBuRST)**

2019-2020

- Participated in product research for solar panels, the successful deployment and recovery of a satellite payload, presented to corporate sponsors in bi-annual meeting, and wrote and refined multiple sections of the safety and launch manual
- A subsidiary of the Student Space Systems Fabrications Laboratory (S3FL)

**Honors****Boy Scouts of America, Troop 54, Novi, MI**

2010-2017

- Eagle Scout
- Elected into the Order of the Arrow, Scouting's National Honor Society

June 2016

August 2012

**Publications**

Vempala, V., & Fuher, J. F., & Dominguez, H. L., & Ogunbunmi, J., & Huang-Saad, A., & Shekhar, P. (2021, July), Students' Self-Perception of Their Entrepreneurial Characteristics Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. <https://peer.asee.org/37773>

Dominguez, H. L., & Vempala, V., & Shekhar, P., & Huang-Saad, A., & Fuher, J. F. (2021, July), *Engineering Students' Perceptions of Entrepreneurship: A Qualitative Examination* Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. <https://peer.asee.org/37076>