

Jacob Fuher

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EDUCATION

Purdue University

Master of Science in Electrical and Computer Engineering

West Lafayette, IN

May. 2025

University of Michigan

Bachelor of Science in Electrical Engineering

Ann Arbor, MI

Dec. 2020

Schoolcraft College

Guest Student

Livonia, MI

TECHNICAL KNOWLEDGE

Software: MATLAB, Python, KNIME, LabVIEW, Multisim, Minitab, SPSS, Fusion 360, SQL, HUE, HTML, C++, Power BI, TeamCenter, Microsoft Office and Google Suite.

Graduate Coursework: Linear Algebra, Digital Signal Processing, Random Variables, Lumped System Theory, Digital Communications, Hybrid Electric Vehicles, Computer Communication Networks, Digital Image Processing.

Undergraduate Coursework: 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

Design Release Engineer (DRE), Switches/Controls

General Motors

Apr. 2024 – Present

Warren, MI

- Engineer, develop, release, continuously improve, validate, and define requirements for switches and sensors across all vehicle platforms.

Electrical Service Release Engineer

General Motors

Jul. 2022 – Apr. 2024

Warren, MI

- Representing Service Engineering during the vehicle development process and partnering with product engineering teams to achieve world class serviceability.
- Develop, validate, and implement common serviceability specifications, service part release/information and simultaneous production across multiple vehicle platforms.

OpEx Leader – National ACDelco & Retail Accounts

General Motors

Jan. 2022 – Jul. 2022

Warren, MI

- Led OpEx Project regarding Part Supersessions and how they affect our National Account sales procedures, resulting in ~\$6M annual savings.

Data Analyst – Campaigns, Data Reports & GDM

General Motors

Mar. 2021 – Dec. 2021

Warren, MI

- 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.

Undergraduate Researcher

University of Michigan

Summer 2020

Ann Arbor, MI

- 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.

RESEARCH

- Transforming Engineering Education co-Laboratory (TEEL)** 2020 – 2021
- 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).

PUBLICATIONS

- Cassandra Sue Ellen Jamison, **Jacob Fuher**, Annie Wang & Aileen Huang-Saad (2022) Experiential learning implementation in undergraduate engineering education: a systematic search and review, European Journal of Engineering Education, DOI: [10.1080/03043797.2022.2031895](https://doi.org/10.1080/03043797.2022.2031895)
- 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>

ACKNOWLEDGEMENTS

- C. S. E. Jamison, V. Vempala, A. Wang, J. P. Stegemann and A. Huang-Saad, "What are biomedical engineering employers looking for in new hires? A Qualitative Synthesis," 2021 IEEE Frontiers in Education Conference (FIE), 2021, pp. 1-5, doi: [10.1109/FIE49875.2021.9637148](https://doi.org/10.1109/FIE49875.2021.9637148)

MISC.

- Boy Scouts of America, Troop 54, Novi, MI** 2010 – 2017
- Eagle Scout (*Jun. 2016*).
 - Elected into the Order of the Arrow, Scouting's National Honor Society (*Aug. 2012*).
- Institute of Electrical and Electronics Engineers (IEEE)** 2018 – 2021
- President, University of Michigan Student Branch.
 - Previous positions held: VP Finance, VP operations, Membership Chair.