Jacob Fuher

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Education

Purdue University, West Lafayette, Graduate School — December 2024
- Master of Science in Electrical and Computer Engineering (GPA 3.45)

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++, Python, Power BI, Microsoft Office and Google Suite

Relevant Coursework

- Graduate: Linear Algebra, Digital Signal Processing, Random Variables, Lumped System Theory, Digital Communications, Hybrid Electric Vehicles, Computer Communication Networks
- 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 | Electrical Service Release Engineer — July 2022-Present
- 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

General Motors | OpEx Leader – National ACDelco & Retail Accounts (TRACK) — January 2022-July 2022
- Led OpEx Project regarding Part Supersessions and how they affect our National Account sales procedures, resulting in ~$6M annual savings

General Motors | Data Analytics – Campaigns, Data Reports & GDM (TRACK) — March 2021-December 2021
- 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
- Previous positions held: VP Finance, VP operations, Membership Chair

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)

Honors

Boy Scouts of America, Troop 54, Novi, MI   2010-2017
- Eagle Scout   June 2016
- Elected into the Order of the Arrow, Scouting's National Honor Society   August 2012

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

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.