

Vance Kreider

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EDUCATION

University of Michigan

Ann Arbor, MI

Bachelor of Science in Engineering in Mechanical Engineering

May 2025

GPA: 3.99/4.00

- Henry Ford II Prize | Albert Kahn Scholarship | Dean's Honor List (5 terms)
- Minors: Mathematics, Music
- Coursework: Design & Manufacturing I–II, Mechanics of Materials, Fluid Mechanics, Heat Transfer, Numerical Methods

Engineering in Paris Study Abroad

May 2022–June 2022

- Completed coursework in electrical circuits and French culture
- Participated in excursions and lived with a host family to better understand French language and culture

EXPERIENCE

Dominion Engineering, Inc.

Reston, VA

Mechanical Engineer Intern

May 2023–August 2023

- Designed a test apparatus using SolidWorks for fundamental research on the heat transfer properties of steam generator tube bundles in nuclear power plants
- Defined and executed a benchtop test program to evaluate a liquid metal thermal interface material (TIM), including thermocouple measurements, post-test sample sectioning, and 3D microscopy
- Analyzed temperature data and microscope images to confirm the viability of TIM as a key element of a future heat transfer test facility; presented results to customer
- For another project, identified drawing updates and fabricated components for a fuel leak-detection system

University of Michigan

Ann Arbor, MI

Senior Writing Fellow

August 2022–Present

- Assessed student reports, including MATLAB modeling, for an introductory differential equations course
- Held office hours and provided written feedback to enhance student understanding of course material

U.S. Naval Research Laboratory

Washington, D.C.

Science and Engineering Apprenticeship Program Intern

June 2021–August 2021

- Analyzed Very Large Array data to support Parker Solar Probe and improve space weather forecasting
- Organized, processed, and visualized Faraday rotation measurements to infer solar magnetic field strength
- Presented results to demonstrate method utility and model validation at professional conferences

SKILLS

Design and Fabrication: SolidWorks, Ansys Discovery, mill, lathe, drill press, 3D printing, swaged tube fittings

Computer: Excel, MATLAB, Microsoft Project, LabView; introductory Python, C++

Language: intermediate French

Other: technical writing and presentations

ACTIVITIES

Tau Beta Pi: The Engineering Honor Society, *External Vice President*

December 2022–Present

University of Michigan Fall Engineering Career Fair, *Director*

January 2024–Present

- Planned and executed the fortieth instance of the university's largest engineering career fair
- Anticipate registering over 250 companies to help thousands of students find jobs

University of Michigan Autonomous Robotic Vehicle Team, *Platform Team Member*

January 2023–Present

- Performed conceptual design of suspension systems for an autonomous vehicle
- Fabricated aluminum vehicle chassis components

University of Michigan Orchestra and Band (music major ensembles), *Trumpet*

August 2021–Present

Other Interests: trumpet (11 years), travel (12 countries, 36 US states), photography, skiing, music theory