JACKSON KREBSBACH

1270 Kuehnle Court, Ann Arbor, MI 48103
(734) · 678 · 7984 ◇ jacksonkrebsbach@gmail.com
www.github.com/jackkrebsbach

EDUCATION

Hope College *Conferred May 2024*
B.S. in Mathematics
Concentration in Statistics
Overall GPA: 3.97

Highlighted Coursework Statistics for Data Science, Linear Algebra, Real Analysis, Numerical Analysis, Introduction to Probability Algebraic Structures, Databases for Data Science, Software Design & Implementation, Computer- Aided Design, Introduction to Mathematical Physics, Physics Lab: Electronics, Biomedical Instrumentation

AWARDS AND HONORS

- Pi Mu Epsilon Outstanding Speaker Award at Joint Mathematics Meeting *January 2024*
- Erik Aasen Scholarship *August 2022*
- Joint Mathematics Meetings Honourable Mention Poster *January 2020*
- John H. Kleinheksel Mathematics Award *May 2019*
- Pi Mu Epsilon Mathematics Honor Society Inductee *May 2019*
- Hope College Presidential Scholarship *August 2018*

GRANTS

- Pi Mu Epsilon Travel Grant, 2024 Joint Mathematics Meetings, $1200
- Krebsbach, J., "Using Machine Learning and Drones to Estimate Vegetation Density in Coastal Sand Dunes," $3,000. (May 10, 2020 - April 30, 2021). Funded by the National Aeronautics and Space Administration (NASA), under award number 80NSSC20M0124, Michigan Space Grant Consortium (MSGC)
- American Mathematical Society Travel Grant, 2020 Joint Mathematics Meetings, $400

EXPERIENCE

Undergraduate Researcher May 2019 - Present
Hope College Mathematics & Statistics Department *Holland, MI*

· Main work consists of using machine learning and unmanned aerial systems to map surface composition in Lake Michigan sand dunes
· Conducted field work, flying drones to capture multi-spectral imagery and acquire ground-based photography at Saugatuck Harbor Natural Area.
· Performed big data analysis in R and Python, generating feature imagery, sampling training data, and training machine learning algorithms
· Gave numerous talks and presented several posters at Join Mathematics Meetings, Geological Society Association Meeting, Pi Mu Epsilon Meetings, Hope College colloquium, and Mathfest

Teaching Assistant January 2024 - Present
Hope College *Holland, MI*

- Assisting students course material for accelerated statistics (Math 219) and statistics for data science (Math 313)
- Grade lab assignments completed in R

Accenture Student Consultant January 2024 - Present
Hope College Center for Leadership *Holland, MI*

- Student consultant project for Accenture IT company
- Research and ranking of the Top 3-5 SC Analytics Platforms including a comparative analysis
- Demystifying the generative AI vs traditional AI components

REZA INC. May 2019 - Present
Co-Founder *Detroit, MI*

- Co-created REZA INC., a VC backed light-up footwear brand dedicated to inspiring people to 'Light Your Own Path'
- Completed residency at Techstars Sports Accelerator Powered by Indy (2020)
- Sourced components and completed shoe development in Taiwan (Nov 2020 – Apr 2021, March 2023 – June 2023)
- Sold over 2,000 pairs and acquired wait list of 70K+

Ford Motor Company June 2022 - August 2022
Internship *Dearborn, MI*

- Worked as an intern in software product development
- End to end data pipeline sourced from features in vehicles to create data visualizations using SQL, Python, Putty, Amplitude.
- Created a clinic to evaluate the digital owner's manual found in the entertainment system in the Ford F150 Lightning
- Presented recommendations to executives based on insights gained from study

Favs — Software Developer July 2023 - September 2023, April 2024 - June 2024
Part time *Remote*

- Full stack software developer for social media start-up
- Assisted and interviewed candidates for full time roles and two front end engineers
- Technologies: Amazon Web Services, React Native, Expo

Mathematics and Computer Science Tutor August 2019 - May 2020
Hope College Academic Success Centre *Holland, MI*

- Hired as a tutor for the Software Design & Implementation CS course using the Java programming language
- Led group of four students through the Fall semester of 2019 assisting in course material and projects
- Worked in the Hope College Math Lab for lower and upper-level mathematics courses in the Spring of 2020
- Provided mathematical guidance to students on an individual and group basis in help sessions.

Youth Ambassador to the Philippines July 2016 - April 2017
U.S State Department *Biñan, Philippines*

- High-school exchange student in the Philippines supported by the Yes-Abroad Kennedy-Lugar Scholarship program
- Lived with a Filipino family for a period 10-months in Biñan, Laguna
- Studied at Jacobo national high school and University of Perpetual Help

TECHNICAL STRENGTHS

Computer Languages	R, Python, Jupyter, MATLAB, JavaScript, Typescript, Java, HTML, SCSS, CSS
Technologies & Frameworks	Git, Vim, Linux, SQL, QGIS, Node.js, React, Next.js, React Native, RStudio, Jupyter, Autodesk Inventor, Agisoft Metashape Vercel, Google Analytics, Shopify,

PUBLICATIONS IN PREPARATION

Krebsbach, J., Yurk, B. P., DeVries-Zimmerman, S. J., Pearson, P., Hansen, E. C. "Mapping vegetation in Lake Michigan sand dunes using unoccupied aerial systems and machine learning" *In Preparation*

SELECTED PRESENTATIONS

- Krebsbach, J., (Yurk, B. P., Mentor), Joint Mathematics Meeting, Talk, "Mapping Plant Populations Using Drones and Machine Learning", San Francisco, CA. (January 4, 2024)
- Krebsbach, J., (Yurk, B. P., Mentor), 48th Annual Pi Mu Epsilon Conference, Talk, "Mapping Vegetation in Lake Michigan Dunes with XGBoost", Miami, OH. (September 29, 2023)
- Krebsbach, J., Yurk, B. P., DeVries-Zimmerman, S. J., Pearson, P., Hansen, E. C. International Conference on Aeolian Research, Poster. "Mapping vegetation in Lake Michigan sand dunes using unoccupied aerial systems and machine learning," Las Cruces, NM. (July 13, 2023)
- Krebsbach, J., Yurk, B. P. Mathfest, 2021, Talk, "Modeling Vegetation Density," Online. (August, 5, 2021)
- Krebsbach, J. (Yurk, B. P., Mentor). Midstates Consortium for Math and Science Undergraduate Research Symposium, Talk, "Dunes & Drones: Using machine learning to map vegetation with drone- and ground-based photography," Online. (November 7, 2020)
- Krebsbach, J., Yurk, B. P. Joint Mathematics Meeting, Poster, "Mapping dune vegetation using drones, ground photography, and machine learning," Denver, CO. (January 17, 2020).
- Krebsbach, J., Yurk, B. P., Pearson, P. T., Stid, J., Hansen, E. C. Geological Society of America Annual Meeting, Poster, "Vegetation and Topography Mapping of Coastal Dune Complexes Using Small Unmanned Aerial Systems and Ground-Based Imagery," Phoenix, AZ. (September 22, 2019)
- Krebsbach, J., (Yurk, B. P., Mentor), PME Mathfest, Talk, "Dunes and drones: A machine learning approach to mapping dune vegetation using small unmanned aerial systems and ground based photography, Cincinnati, OH. (August 1st, 2019)

MEDIA

Grand Rapids Magazine https://www.grmag.com/look-feel/style/fresh-kicks-bright-future/ *November 2023*