**JACKSONKREBSBACH**

1270 Kuehnle Court, Ann Arbor, MI 48103

(734) · 678 · 7984 ⋄ jacksonkrebsbach@gmail.com www.github.com/jackkrebsbach

# EDUCATION

## **Hope College** Expected May 2024

B.S. in Mathematics

Concentration in Statistics

Overall GPA: 3.97

**Highlighted Coursework** Statistics for Data Science, Advanced 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),underawardnumber80NSSC20M0124,MichiganSpaceGrantConsortium(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 in lab and course material for accelerated statistics (Math 219)

· 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

**Software Developer** July 2023 - September 2023

## Contractor Remote

· Mobile app development for a venture capital backed stealth social media start-up

· Assisted and interviewed candidates for full time roles

· Worked with a team consisting of one backend developer and two front end engineers

· Technologies: Firebase, React Native, Test Flight

# 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 Bean, 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 Binan, 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),48thAnnualPiMuEpsilonConference,Talk,“MappingVegetation 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, “ModelingVegetationDensity,”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 approachtomappingdunevegetationusingsmallunmannedaerialsystemsandgroundbasedphotography, Cincinnati, OH. (August 1st, 2019)

# MEDIA

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