Mikayla E. Norton

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EDUCATION

Michigan State University (MSU)

M.S., Data Science, College of Natural Science   Aug 2022 – May 2024

B.S., Applied Engineering Sciences, College of Engineering   Aug 2019 – May 2023
GPA: 3.82
- Supply Chain Management concentration
- Computational Mathematics, Science & Engineering minor, College of Engineering
- Business minor, Broad College of Business

SELECT COURSEWORK

- Statistics, Probability, and Algorithms
- Computer Science, Computational Science
- Pattern Recognition and Big Data Analysis
- Computational Linear and Matrix Algebra

EMPLOYMENT EXPERIENCE

Data Science Intern, Supply Chain Enabling Solutions – Intel   May 2023 – Dec 2023
- Project owner for automation of change order validation project. Utilized Python (pandas, numpy, pylightxl) to perform data extraction and cleaning across 1000+ contracts, create a pipeline to connect data keys, and identify all invalid data requiring correction for a 10% return on spending (~$12 million in return).
- Under inventory management analytics, generated a policy simulation in AnyLogic and Python of individual spare parts, direct materials, and indirect materials to demonstrate reorder points, optimized order quantities, safety stock, and control inventory planning.

Lead Ambassador, Women in Engineering K-12 Outreach Office – MSU   Aug 2021 – May 2023
- Through leadership of ambassadors, organized and facilitated events of 500+ attendees to educate and de-stigmatize engineering as a profession, especially for women.
- Analyzed data to produce annual impact reports of events, key schools and cities, and engagement of individuals per event.
- Effectively cooperated in team settings with other Ambassadors to organize events, strengthen interpersonal and professional skills, and develop a broader future engineering network for the university.

Graduate Advisor, Girls Who Code & Technovation – MSU   Aug 2022 – May 2023
- Led up to 10 cohorts of K-12 students in underrepresented groups to build skills in programming, computational methodology, and to coach on topics supporting destigmatization and demystification of STEM fields.
- Coordinated curriculum and administered three branches of 10-week programs, including international extensions in Belize, Turkey, and Ghana.

Global Reverse Logistics Intern, Systems & Analytics – Intel   May 2022 – Aug 2022
- Within the department of Customer Fulfillment, Planning, and Logistics, navigated 1000+ order numbers and product IDs to manage backorder return products and find a possible substitution from other workflows.
- Produced business case for optimization project of return processes at Intel to intertwine Return for Credit and Return for Exchange/Customer Warranty transit lines.
- Created insightful analytics using Excel and Power BI frontend, SQL backend, and data warehousing with Salesforce and RPM management tools.

Supply Chain Analytics Intern, Demand Planning – PPG Industries   May 2021 – Mar 2022
- Projects included: MAPE/WMAPE demand forecasting, daily inventory reports, OTIF weekly reports, bi-monthly cluster forecasting, group forecasting for Powder SBU to ensure effective Product Data Management (PDM) for over 100,000 SKUs multi-nationally, master data cleansing of historic sales.
- All analytics conducted with the use of Oracle Business Intelligence, Excel, Power BI, and Demantra for Liquid, Powder, and Packaging segments across five primary plant locations.

Operations Project Lead, Konica Minolta   Summer 2019, Summer 2020
- Oversaw teams of 10-20 individuals and projects to configure and provision over 200,000 iPads, Macs, Chromebooks, and Windows devices across the season. Optimized workflow using Six Sigma, Lean Manufacturing, industrial psychology, and DMAIC principles.
- Supervised and trained employees and new team leads. Conducted new employee orientations as needed. Conducted conflict de-escalation, problem-solving, and continuous improvement of workflows.

RESEARCH EXPERIENCE

Movie Recommendation Algorithms, CMSE 831 – MSU   Jan 2023 – May 2023
- Generated and compared various learning, optimization, and recommendation algorithms using a large dataset of six csv files and 20 million records to recommend movies based on content, user, and film data.
- Utilized Python to create algorithms including KNN, collaborative filtering, mean imputation, singular value decomposition and thresholding, principal component pursuit, soft impute, low-rank matrix recovery, robust principal component analysis, randomized matrix completion, deep learning, matrix factorization, and gradient descent.

Credit Score Modeling and Classification, STT 811 – MSU   Jan 2023 – May 2023
- Conducted EDA, data cleaning, feature engineering, and model generation for a large dataset of 28 features and 100,000 records to generate predictive models for credit score from a variety of features.
- Utilized Python (sklearn, keras, scipy, and others) to conduct all phases of the project, including principal component analysis, latent dirichlet allocation, clustering, support vector classification, and extreme gradient boosted decision trees with hyperparameter tuning to produce the final predictive model.

Data Management for Global Automotive Aftermarket, AESC 410/Capstone – MSU   Jan 2023 – May 2023
- Tasked with full project management of capstone, sponsored by DRiV for Applied Engineering Capstone.
- Generated a benchmarking evaluation of eight various supplier management softwares and 25 respective capabilities, to translate into a weighted statistical average score and percentage compatibility of each provider with the needs of the stakeholder.
- Utilized findings from a sensitivity analysis to provide a resilient solution, presented as a business case with impact, findings, and future outlook to conclude the project.

Spotify Music Popularity Predictor, STT 810 – MSU   Sep 2022 – Dec 2022
- Conducted exploratory data analysis of a 20,000 entry and 15 feature dataset to apply foundational statistical methods and predict which features correlate with song popularity.
- Project utilized R programming language, data visualizations, feature engineering, and a supervised machine learning application in linear regression modeling to predict the popularity of the test dataset.
- Applied Skills: machine learning, regression, R (ggplot, Plotly, tidyverse, caTools, MASS), kernel densities, feature engineering and transformation.

An Invasive Species Study on Severity, CMSE 402 – MSU   Jan 2022 – May 2022
- Explored the connection between data visualization and storytelling, without the use of detailed modeling and feature extraction. Generated interactive data visualizations and graphics to demonstrate species taxonomy, geographic clustering, time series, and vehicle for introduction in the environment.

- Applied skills: data visualization, Python (matplotlib, seaborn, plotly, numpy), data cleaning

Research Assistant, Analysis of Voice and Hearing Lab – MSU   Sep 2019 – Sep 2021
- Hearing research focused on otoacoustic emissions. Data manipulation and analysis to support research across 10 subjects both in-phase and out-of-phase frequency levels on a triad of paradigms.
- Research included: cross-comparison of voice raters using Excel for system optimization, MATLAB computation to develop machine learning intelligence, TeX language in manuscript development, glottal attack, offset, and obstruction vocal fold measures, all presented at ASA virtual conference in Dec. 2020.

PUBLICATIONS
Scheidler, S., **Norton, M.**, Naghibolhosseini, M. The effect of level-ratio paradigm on DPOAE fine structure. *The Journal of the Acoustical Society of America.* December, 2020.

PRESENTATIONS AND HACKATHONS
Norton, M. (2023, May 7). Celebrating daily achievements and impact [Keynote address]. Michigan State University College of Engineering Baccalaureate Commencement, East Lansing, MI, United States.

Michigan State University, Major League Hacking (2023, January 28-29). SpartaHack 8. [Hackathon]. East Lansing, MI, United States

Scheidler, S., **Norton, M.**, Naghibolhosseini, M. (2020, December 7-11). The effect of level-ratio paradigm on DPOAE fine structure [Conference presentation]. Acoustics Virtually Everywhere, The 179th Meeting of the Acoustical Society of America. Virtual.

Norton, M. (2017, November 9). The Difficulty of Positivity [Keynote address]. TEDxHowellHighSchool, Howell, MI, United States.

RESEARCH SKILLS AND CERTIFICATIONS
Career Essentials in Data Analysis by Microsoft and LinkedIn Certificate	May 2023
AnyLogic Training Course Certificate	May 2023
HackerRank SQL (Basic) Certificate	Nov 2022
Six Sigma Green Belt Certified (SSGBC)™	June 2020
MSI Project Management Lean Process Certified (PM-LPC)™	May 2020
MSI Executive Management Certified (EMC)™	May 2020

Programming Languages: Python, R/RStudio, MATLAB, C++, Kotlin, AnyLogic, HTML/CSS
Libraries: NumPy, SymPy, Pandas, Matplotlib, Plotly, Scikit-learn, SciPy, TensorFlow, Stat, Seaborn, PyTorch
Data Management/Visualization: SQL (SQLite, mySQL, SQLdf), PowerBI, Tableau, Excel, Power Query

EXTRACURRICULARS & LEADERSHIP
President, Leadership Advantage for Engineers, MSU   Sep 2020 – May 2023
- Student run, intensive four-day leadership seminar designed for incoming MSU students interested in engineering careers.
- As president, facilitated bookings of all campus resources, developed engagement with incoming students and parents, and directed responsibilities of all upperclassmen mentors.

Director of Public Relations, Society of Applied Engineering Sciences, MSU   Sep 2021 – May 2023
- Organization dedicated to fostering interest, providing networks, and marketing opportunities surrounding

the Applied Engineering Sciences degree program.
- Under the public relations role, created a new and engaging content brand to increase club interactions, through utilization of interpersonal interactions, web development, and social media management.

Director of Membership Connections, Women in STEM, MSU   Jan 2021 – May 2023
- Club committed to empower, connect, and inspire undergraduate women pursuing a career in STEM.
- Membership connections facilitated activities and events to encourage networking and community-building within the organization, as well as trained new social media chairperson on content engagement.

Mentor, Women in Engineering Student Success, MSU   Aug 2021 – May 2023
- Worked with MSU office dedicated to introducing, engaging, and retaining women in engineering careers to promote long-term diversity and inclusivity.
- Acted as a mentor to first year students in the same majors of engineering to provide advice throughout first year journeys.

President, Society for Engineering Management, MSU   May 2020 – Jan 2022
- Club dedicated to building engineering and project management skills of membership via company sponsored projects and guest speaker education series.
- As president, worked in tandem with the executive team to create educational events and experiences for members, facilitate trainings and workshops, and increase membership engagement.

H-STAR: Honors Students Actively Recruiting   Jun 2022 – May 2023
H-STAR involves current students in the recruitment of new Honors College members. The group's volunteers serve as ambassadors for high-achieving high school students as they navigate through the MSU admissions process.
- Honors College panelist, meeting with prospective students and their families at special programs on and off campus.

Graduate Women in Science (GWIS) Mid-Michigan   Aug 2022 – May 2024
Engineering Spring Break Corporate Tour   Feb 2020
Changing Health, Attitudes, + Actions to Recreate Girls (CHAARG)   Sep 2019 – Mar 2020
Section Leader, Drumline, Howell High School   Jun 2017 – May 2019

PROFESSIONAL AFFILIATIONS
Society of Women Engineers (SWE)
Graduate Women in Science (GWIS)
Lesbians Who Tech

HONORS & AWARDS
College of Engineering Commencement Speaker, MSU
Von Ehr Scholarship, College of Engineering, Merit, MSU
Wochholz Scholarship, Resource Center for Persons with Disabilities, College of Engineering, MSU
Culpepper Scholarship, Merit, MSU
3M Optimized Operations Experience Scholarship, Applied Engineering Sciences, Merit, MSU
Honors College Competitive Scholarship, Honors College, MSU
Masons Scholarship, Merit
Cobb-Hall Scholarship, Business, Merit
Knights of Columbus Scholarship, Engineering, Merit
Konica Minolta Scholarship, Merit
Garvy Scholarship, Music, Merit

Northwest Elementary Collegiate Scholarship, Merit
Livingston County Textbook Scholarship, Merit, MSU
National Defense Industrial Association Scholarship, STEM, Merit
State of Michigan Scholarship, Merit

REFERENCES

Teresa Isela VanderSloot
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