

ZACHARY HORTON

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT (Cambridge, MA)

Candidate for Master of Business Analytics, Operations Research Center, August 2024, GPA 5.00/5.00 2023 - Present

NORTH CAROLINA STATE UNIVERSITY (Raleigh, NC)

Bachelor of Science in Industrial & Systems Engineering, Health Systems Engineering Cert., GPA 4.00/4.00 2019 - 2023

TECHNICAL SKILLS

- Programming: SQL | Python (Pandas, NumPy, Scikit-Learn, TensorFlow) | R | Julia | SAS | Object Oriented Programming
- Software: Databricks | Spark | Salesforce | Tableau | PowerBI | Git | PostgreSQL | NoSQL
- Certificates: AWS Cloud Practitioner (In-progress) | Cognitir Advanced SQL | Cognitir Intro to SQL

WORK EXPERIENCE

MIT SLOAN | THERMO FISHER SCIENTIFIC (Cambridge, MA | Allentown, PA)

Data Science Intern, Capstone Project (7 months)

Spring 2024 - Present

- Forecasting demand and new sales wins through machine learning models, using historical CPQ and Salesforce pipeline data

MIT SLOAN | NATIONAL INSURANCE CRIME BUREAU (Cambridge, MA)

Analytics Lab Team Member

Fall 2023

- Engineered machine learning models to predict fraudulent claims and identify high-fraud events from 127 tropical storms, primary goal to enhance workload forecasting and reduce \$200K in annual investigative expenses (Julia, Python, R)
- Examined 690,000 fraudulent claims spanning 18 years (Tableau)
- Collaborated with senior data scientists to realign project goals and presented findings

CORNING INCORPORATED (Charlotte, NC)

Manufacturing Data Analytics Intern

Summer 2022 - Fall 2023

- Automated processing for monthly sales data from with Meta's LLM (BART) to analyze 7.3 million rows, adding customer-level granularity to analytics (Python)
- Generated 83 process quality metrics utilizing a convolutional neural network computer vision model in Databricks, earning finalist recognition for the Manufacturing Leadership Council (Python, SQL)
- Showcased project outcomes and strategic impact to CDIO and senior IT leaders across Corning's 5 major business units

UNC REX HOSPITAL (Raleigh, NC)

Spring Senior Design Project Team Member

Spring 2023

- Accomplished goal of decreasing daily backlog of surgical trays from 600 to 75 by developing an optimized scheduling model; reduced required FTEs from 15 to 10 and weekly hours from 584 to 405 compared to previous schedule (R, Tableau)
- Project received 1st place award at spring semester senior design competition for Health Systems Engineering program

DUKE HEALTH (Durham, NC)

Fall Senior Design Project Team Member

Fall 2022

- Developed KPIs focusing on room utilization, cancellation frequency, and scheduling patterns to drive average room utilization up from 30% to 85% while upholding a high quality of care (Python, R, Tableau)

NC STATE UNDERGRADUATE RESEARCH (Raleigh, NC)

SimOpt GUI Developer

Summer 2021 - Spring 2023

- Created graphical user interface (GUI) for open-source simulation and optimization library in Python and acknowledged for contributions in research paper published in the INFORMS Journal on Computing 35(2):495-508 (Python, Git)

Diabetic Retinopathy (DR) and Macular Edema (ME) Researcher

Spring 2022

- Applied linear models and continuous time Markov-chains to model the progression of DR and ME for 400,000+ patients (R)

PENDO (Raleigh, NC)

Revenue Operations Intern

Summer 2021

- Directed a cost-savings initiative by analyzing company's utilization of over 2,000 Salesforce fields across 5 objects; efficiently managed and resolved over 500 tickets, ranging from account ownership to deal-desk requests (Excel)

LEADERSHIP EXPERIENCE

NC STATE (Raleigh, NC)

Engineering Ambassador

Fall 2021 - Spring 2023

- Lead the TA and Information Session coordinating teams, served as TA for E101 & E102 classes, consisting of 100+ students

American Society for Quality (ASQ) Student Branch President

Fall 2020 - Spring 2023

- Facilitated keynote speaker series and technical skills workshops while growing club membership by 200%