
EDUCATION

Duke University

Fall 2018 – Spring 2022

- **Majors:** B.S. in Computer Science, B.S. in Statistical Science (GPA: 3.9)
- **Minor:** Mathematics
- **Computer Science Coursework:** Data Structures & Algorithms, Database Systems, Computer Architecture
- **Statistics Coursework:** Regression Analysis, Probability, Multivariable Calc., Linear Algebra, Bayesian Methods

EMPLOYMENT

Research Intern

+DataScience Summer Research Program

Summer 2020

Advanced Project in Health Data Science: Risk Prediction for COVID-19 from Electronic Health Record Data

- Received competitive funding through the Duke+DataScience program (7 students selected out of 28 applicants) to perform faculty-led research using advanced, substantive quantitative modeling and analyses
- Developed predictive gradient boosting models with EHR data for 25,000 patients in the Duke Health System to generate risk scores for critical health outcomes
- Stratified risk scores by COVID-19 diagnosis feature to identify underlying conditions contributing to severe patient outcomes (PI: Dr. Ricardo Henao, Department of Bioinformatics)

Undergrad Teaching Assistant

Duke University

Fall 2019 – Summer 2020

- Courses: Intro to Data Science, Biostatistics, Data Analysis & Inference, Computer Architecture
- Created lab assignments and led bi-weekly meetings for sections of between 8 and 90 students
- Managed daily question boards, held weekly office hours, and met 1-on-1 with students to provide feedback

Data Scientist, Intern

Data+ Interdisciplinary Research

May – Aug 2019

Getting Granular on Social Determinants of Health (<https://bit.ly/3fn7JU8>)

- Constructed 3 state-of-the-art predictive models to investigate how socioeconomic data could improve predictions for hospital admissions from EHR data and Medicare claims for 100,000 patients
- Discovered 12% model bias for marginalized groups of patients by quantifying algorithmic disparate impact

SOFTWARE PROJECTS

Bass Connections: Sustainable Laparoscopic Surgery

Fall 2019 – Spring 2020

- Implemented a video streaming web application for use with a student-created laparoscope prototype, with feedback from international clinical stakeholders (PI: Dr. Tamara Fitzgerald, School of Medicine)

Mobile Classification of Pigmented Skin Lesions

Fall 2018 – Spring 2019

- Designed a convolutional neural network to detect and classify 7 classes of pigmented skin lesions in the HAM10000 dataset
- Advanced the 77%-accurate neural network to use in a mobile application via TensorFlow Lite for immediate classification of cellular-device captured skin lesion images (Team-lead: Dr. Matt Engelhard)

LEADERSHIP EXPERIENCE

Duke Tour Guide Executive Board

Spring 2020 – present

- Oversee recruitment of new tour guides and campus ambassadors, organize panels for prospective students
- Lead walking tours of the Duke campus for groups of 20+ visitors, sharing information about student activities, initiatives, and experiences

SPIRE Fellows Student Executive Board

Fall 2019 – present

- Organize programming (for our 60+ fellows) centered around the need to increase inclusion, retention and success of individuals who are typically underrepresented in STEM studies
- Establish mentor relationships for SPIRE fellows with faculty who exemplify representation in STEM fields

SKILLS

Software: (*proficient*): C, Git, Java, Python, R, SQL (*familiar*): Assembly, JavaScript, HTML/CSS, MATLAB, Unix