

Isaac Moorman

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EDUCATION

ST. JOHN'S UNIVERSITY

Queens, New York

Major: B.A. in Mathematics

Minor: Physics

May 2021

- *Academics:* 3.9/4.0 Overall GPA, 4.0/4.0 Mathematics GPA

- *Relevant Coursework:*

Undergraduate Classes: Calculus I, II, III, IV, Differential Equations, Numerical Methods, Linear Algebra, Statistics I, Intro to Machine Learning, Numerical Analysis, Advanced Calculus I (Real Analysis), Complex Variables, Intro to Mathematical Thinking, Physics I, II, Thermodynamics, Sports Analytics, Chinese I, II
Graduate Classes: Operations Research I

EXPERIENCE

Data Science Internship at CACI International

Austin, Texas

Machine Learning Intern

Summer 2020

- Developed deep learning algorithm to predict electron content in the ionosphere
- Learned to use neural networks effectively (RNN's and GAN's)
- Built Python software using Tensorflow, PyTorch, and OpenCV libraries
- Sole inventor of patent pending for the project's developments

Mathematics Research

Queens, New York

Assistant Researcher

2019 - Present

- Created representations of functional inequalities through hypergraphs
- Chosen to present at MAA New York Sectional Meeting 2020 and St. John's Research Conference Supported by the National Science Foundation grant NSF DMS-1700176.
- Research done with Dr. Florin Catrina, Professor of Mathematics

Student-Faculty Research Group Member

2020 - Present

- Working on open Graph Theory problems including Minimal Spanning Tree Congestion
- Programmed algorithms in R to find results
- Supported by the National Science Foundation grant NSF DMS-1700176 and NSF DMS-1953773
- Research done with Dr. Mikhail Ostrovskii, Dr. Florin Catrina, and Dr. Lakshmi Iswara Chandra Vidyasagar

Computer Skills

- Python proficiency with specialization in machine learning
- Python library proficiency with Tensorflow, SciKit Learn, OpenCV, Numpy, and Pandas
- R proficiency with specialization in graph theory
- C++/C basic knowledge
- SQL basic knowledge
- IDE's: Spyder, JupyterNotebooks, RStudio, Visual Studio Code, Xcode

OTHER EXPERIENCE

St. Johns Math Department

Queens, New York

Math tutor, and leader of collaborative sessions

2019 - 2020

Target Corporation

Superior, Colorado

Service and Engagement Team Leader (Manager)

2015 - 2019

Interests/Activities:

- Sigma Pi Sigma Physics Honors Society Member
- St. John's Pep Band Assistant Director