# Ian Moritz

625 University Avenue, Room 213 | Ithaca, New York 14850
(703) 472-0424 | icm35@cornell.edu | linkedin.com/in/iancmoritz | github.com/iancmoritz

## EDUCATION

**Cornell University, College of Engineering** **Ithaca, NY**
*Bachelor of Science, Electrical and Computer Engineering & Computer Science, 3.48 GPA* *Expected May 2022*
**Relevant Coursework:** CS 4780 Machine Learning for Intelligent Systems (Python), CS 3110 Data Structures and Functional Programming (OCaml), CS 4700 Foundations of Artificial Intelligence (Python), ECE 3140 Embedded Systems (C), ECE 3100 Probability and Inference, MATH 2210 Linear Algebra, MATH 2930 Differential Equations, ILROB 4795 Negotiations

**Thomas Jefferson High School for Science and Technology** **Alexandria, VA**
*High School Diploma, 4.38 GPA* *September 2014 – June 2018*

## PROFESSIONAL AND LEADERSHIP HISTORY

**Department of Defense (DOD) SMART Scholarship Program** **Dahlgren, VA**
*SMART Scholar, Summer 2020 Software Engineering Intern* *May 2019 – Present*
- Competitively selected as a DOD SMART Scholar, which includes three years of full tuition and a yearly stipend (~$250,000 value)
- Entering as a software engineer (Summer 2022) at the Dahlgren Naval Surface Warfare Center's Lethality and Effectiveness Branch

**Cornell Delta Sigma Pi** **Ithaca, NY**
*Pledge Class President, Brother* *September 2019 – Present*
- Lead ten new members of the Alpha Theta class through Delta Sigma Pi's professional new member education process
- Received intensive training in slide deck design, PowerPoint, Excel, financial modeling, and professional presentation etiquette

**Net Impact** **Oakland, CA**
*Summer Analyst* *May 2019 – July 2019*
- Created internal data management and contestant tracking systems and best practices to execute the annual Up to Us Competition
- Redesigned paid advertising ROI calculations with more accurate performance metrics for Net Impact's $20,000 annual ad spend
- Optimized the 2019 Net Impact conference ticket pricing model to maximize incentives for large group attendance and engagement

**Cornell Business Analytics** **Ithaca, NY**
*Project Manager* *September 2018 – Present*
- Developed social media, website, and marketing strategies for a New York nonprofit to increase donation revenues and engagement
- Managed a three-person team developing a supply-chain optimization model for a regional warehouse of a Fortune 50 automaker

**Preston Wealth Advisors** **Reston, VA**
*Software Developer* *June 2017 – February 2018*
- Built an exchange-traded fund backtester using Quantopian's Zipline trading library, BeautifulSoup in Python, and StockCharts data
- Implemented the SigOpt Bayesian optimization platform into the backtester for runtime-efficient alpha and returns optimization
- Presented my work listed above and applications of walk-forward Bayesian optimization at the 2018 tjSTAR research symposium

## TECHNICAL SKILLS AND PROJECTS

**Python**
*Professional Experience* *May 2014 – Present*
- Developed software with Jupyter Notebook; used for developing trading software at Preston Wealth Advisors for nine months
- Coded an Othello AI in Python that utilizes α-β pruning, minimax search algorithms, and speed optimizations for deeper search

**OCaml**
*Intermediate Experience* *January 2019 – Present*
- Designed and created a Scrabble AI that could play against human players by performing high-performance dictionary searches
- Attended a Jane Street campus conference on the benefits of functional programming in OCaml in quantitative trading and analysis

**Java**
*Intermediate Experience* *September 2015 – Present*
- Used Java in Android Studio, Firebase for cloud storage backends in Android apps, and acquired Android app design skills in class
- Programmed a texting app that translates incoming texts to Morse code and vibrates the message while phone is on silent

**C**
*Intermediate Experience* *September 2016 – Present*
- Experienced with basic parallel computing and graphics rendering in C with APIs such as Nvidia's CUDA, OpenGL, and MPI
- Created ray tracing software capable of rendering shadows and reflections for 3D geometric objects, images, and surface patterns

**Arduino**
*Intermediate Experience* *February 2016 – Present*
- Engineered robotic systems with Arduino microelectronics, 3D Printing (Lulzbot TAZ, Makerbot), and AutoCAD (beginner)
- Built a package-release mechanism on a DJI Phantom 3 drone that allowed it to autonomously deliver First-Aid kits in emergencies
- Utilized the Xbox Kinect API, computer vision, and an Arduino Uno to remotely play a snare drum based on arm swings of the user

## INTERESTS

Open-Water Diving (PADI Open Water Diver), Mixed martial arts, Snowboarding, *The Economist*, Project Management, Mentorship