Michael Capriotti

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Education

Northwestern University - B.A. in Computer Science & Mathematics *Expected 2028*

Illinois Mathematics and Science Academy - High School *2021 – 2024*
- ○ **Coursework:** Differential Equations, Statistics, Calculus Based Mechanics/Electricity and Magnetism, Modern Physics, Physical Chemistry

Relevant Work Experience

Full-stack Development Intern - Hudson Design House *Oswego, IL*
July 2024 – Present
- ○ Creating an ecommerce website using HTML, CSS, and Javascript
- ○ Implementing Django to manage user accounts, product listings, and shopping cart functionality

Quantum Computing Research Intern - Los Alamos National Laboratory *Remote*
Feb 2024 – Present
- ○ Utilizing semidefinite programming for quantum algorithms with Python
- ○ Enhancing efficiency in solving NP-hard QUBO problems

Academic Tutor - Amikka Learning *Remote*
May 2024 – October 2024
- ○ Tutored math and physics & assisted students with SAT preparation

Data Science Research Assistant - Kellogg School of Management *Evanston, IL*
August 2022 – June 2024
- ○ Processed 1000+ images with pytesseract using Optical Character Recognition
- ○ Analyzed executive traits with web browser automation through ChatGPT using pyppeteer
- ○ Sorted data using Pandas and managed excel files with Openpyxl

Projects

QUBO To Ising *Github* ↗
- ○ Warm started QAOA (Quantum Approximate Optimization Algorithm) to solve Quadratic Unconstrained Binary Optimization problems: Portfolio Optimization, Random QUBOs, Traveling Salesman, and Maximum Independent Sets.

Executives Traits AI *Github* ↗
- ○ Created a method for extracting and analyzing data by feeding it through ChatGPT via automation of a remote debugging port (specifically used for processing data on executives).

Zolpidem *Zolpidem.com* ↗
- ○ Built an informative website on insomnia using Wordpress and HTML. Enhanced search visibility through SEO optimization and designed a user-friendly interface to provide accessible resources.

Skills

Languages: Proficient: Python, HTML/CSS Learning: JavaScript, Django, MySQL

Technologies: Jupyter Notebook, Google Colab, Git, Visual Studio Code, Excel, Wordpress

Frameworks and Libraries: Pandas, NumPy, Matplotlib, Seaborn, Openpyxl, Pyppeteer, Pytesseract, Qiskit

Conference Publications

Undergraduate University's Prestige on Top Firm Executives *Digital Commons 2024* ↗
Frydman C, **Capriotti M**, Sun D.

Executive's Firm Relations and Implications of Exogenous Death *Digital Commons 2023* ↗
Frydman C, **Capriotti M**, Sun D.

Organizations

Minority Introduction to Engineering, and Science at MIT (MITES)
Selected from over 2,700 applicants, researched and presented at MITES Symposium on AI bias.

Minority Business Association (MBA) at Northwestern University
Developed skills in project management, industry knowledge, and professional networking.