# David Wang

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| **education** | |
| University of Michigan, Ann Arbor |

**M.S. in Quantitative Finance and Risk Management 08/2024 - 12/2025**

**Relevant coursework (expected):** Algorithmic Trading, Capital Markets, Currency Markets, Numerical Methods, Stochastic Processes, Regression, Computational Finance, Financial Trading, Global Markets, International Markets

**B. Eng. in Aerospace Engineering, Minors in Computer Science and Math 08/2020 - 05/2024**

**Relevant coursework:** Algorithms and Data Structures, Probability, Multivariable Calculus, Differential Equations,

Machine Learning, Financial Mathematics

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| **Skills And Programming Languages** |

**Relevant Skills:** Differential Equations, Mathematical/Financial Modelling, Machine Learning, Financial Analysis, Grit, Independent/Guided Research, Punctual Presentations, Decisive Leadership, Group Cooperation and Adaptivity

**Programming Languages:** C++ (4 years), Python (5 years), MATLAB (3 years)

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| **Experiences and Employment** |

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| Visual Augment Stock Tracking Tool, Independent Project (Python) | 06/2024 - 07/2024 |

https://github.com/dawangan/Stock\_Tracker\_App\_InDev

* Implemented a stock recommendation program to create a portfolio based on a user’s preferences for various metrics
* Developed a UI for graphing in PyQt5 to compare metrics of recommended stocks to an existing portfolio
* Will pitch this platform for funding with the University of Michigan’s Entrepreneurship Leadership Program and expect further development with the Michigan Finance and Mathematics Society

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| Trading Strategies and Sentiment Analysis Independent Study (Python) | 01/2024 - 05/2024 |

* Implemented and evaluated 6 momentum and weighted average trading strategies using the S&P ticker (SPY)
* Performed sentiment analysis using roBeRTa on 30+ news sites’ articles and aligned them with SPY closing prices
* Using temp scaling and Monte-Carlo dropout, reduced 90% of model uncertainty and improved sentiment confidence
* Concluded trading algorithms had, on average, 53% higher returns using adjusted sentiment data

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| Northrop Grumman ICBM Sustainment, Roy, UT - Mechanical Engineering Intern (Python, VBA) | 05/2023 - 07/2023 |

* Modeled fluid dynamics of silo doors, derived 5% error Bollinger bands for 10000+ data points of time/pressure curve
* Resolved the root cause for a faulty silo door sensor by comparing historical signal trends and identifying anomalies
* Spearheaded three solutions to update electronic equipment and maintenance practices while solving this $500,000 issue and saving $1.5 million in future testing
* Engaged with senior management and senior technical staff to align silo door solution with the client’s needs
* Applied Python toolkit “tkinter” to develop an inventory management application, streamlined tool usage for 10+ users

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| Miniature Tether Electrodynamics Experiment, Ann Arbor, MI - Structures Subteam (C++) |  | 01/2022 - 05/2023 |

* Led a redesign project for a satellite structural component and achieved a 15% mass and 10% surface area reduction
* Used C++ to parse data from Arduino and optimize sensor circuit while reducing volume by 80% for circuit housing
* Engaged with NASA supervisors weekly, authored a 10-page technical manual and demo for spacecraft development

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| Isuzu Multidisciplinary Design Team, Ann Arbor, MI |  | 01/2021 - 12/2022 |

* Participated in an industry study project team, assisted in the development of a graphical user interface (GUI) in Python (PyQt5) to visualize and send autonomous vehicle data to AWS cloud storage
* Implemented vital UI upgrades for improving user experience, including search bar and system-reset features

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| GPT-2 Micro Model Implementation | 06/2024 - 07/2024 |

* Implemented a GPT-2 model on Andrej Karpathy’s notes, trained on 25% of the data while retaining 60% of its functionality (via loss)

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| **PublicationS** |

D. Wang, A. Gauthier, A. Siegmund, and K. Hunt, Bell inequalities for entangled qubits: Quantitative tests of quantum character and nonlocality on quantum computers, Physical Chemistry Chemical Physics 23 (2020). <https://pubs.rsc.org/en/content/articlelanding/2021/cp/d0cp05444e>