Nicholas L. Maheshwari

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Education:

University of Chicago, Chicago IL (Fall 2020-Present)
-Pursuing Master's in Computer Science with a specialization in Data Analytics
-Expected Graduation Date: Spring 2021

Barrett, the Honors College at Arizona State University, Tempe AZ (August 2016- May 2020)
-Computer Science Major, Business Minor
-GPA: 3.58
-Dean's List: Spring 2017, Fall 2017, Spring 2018, Spring 2019, Fall 2019, Spring 2020
-Graduated (cum laude): May 2020

La Cueva High School, Albuquerque NM (August 2012 - May 2016)
GPA: 3.75 unweighted, 4.135 weighted

Technical Skills:

Languages: Java, C#, Python, SQL, C++, C
Frontend Technologies: HTML, CSS, PHP, Grav, Jekyll, GIMP, Javascript
Frameworks: Spring Boot, Spring, Hibernate
Operating Systems: Linux (Fedora, Ubuntu), Windows
Cloud Technologies: AWS (Route 53, S3, Elastic Beanstalk), Netlify, Digital Ocean

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Employment History:

Helios MI, Co-founder : May 2018 - Present
HeliosMI - Bleeding Edge Quantitative Trading
● Helios MI is a quantitative trading fund that focuses on using the newest software innovations to maximize the returns of derivatives trading.
● Used Java and C# to design algorithmic stock and option trading strategies, connecting to Interactive Brokers API.
● Collaborated in the development of several trading strategies, building a strong foundation in understanding of stocks, options, and the inner workings of financial markets.
● Acquired deep knowledge of Java and it's ecosystem including Spring Boot, Maven, JUnit, Hibernate, etc.
● Back-tested stock trading algorithms using QuantConnect, mainly in C# and Python. Identified potential bugs and improvements using JUnit tests.
● Back-tested option trading strategies using Interactive Brokers Trader Workstation, utilizing their paper-trading capabilities.
● Collaborated in the design of the underlying Order Entry system. This system is used throughout the company to communicate with the brokerage (Interactive Brokers).
● Used HTML and Jekyll to design the company website (https://www.heliosmi.com/), and used Netlify and AWS (Route 53, S3) to deploy the site to the company domain.

Asher Chaim Real Estate, Partner and Software Engineer: May 2017-Present
Asher Chaim - Real Estate Investment
● Designed and used a Python program to scrape data from an external website, which was then used for in depth analysis.
● Used Grav, Jekyll, HTML, and CSS to build the company's website (see above link).
● Used Netlify (and Github) to deploy the current version of the company's website (see above link).
● Used DigitalOcean (and Github) to deploy previous iterations of the company's website.
● Used GIMP to design the company's logo.
● Currently tasked with implementing new features, onboarding new employees, and adding said employees into the system.

Projects

Barrett Thesis

Stock Trading Quantified: An Exploration of Algorithmic Trading Principles using QuantConnect

My honor's thesis was an exploration on the principles and popular strategies of algorithmic stock trading. Throughout my research I focused on exploring high-frequency trading algorithms, mainly because these are the types of algorithms that are employed at Wall Street hedge funds, and also the type I worked on at HeliosMI. Using QuantConnect, a backtesting platform for trading strategies, I developed my own version of three distinct algorithms; a momentum based strategy, a mean reversion based strategy, and a preferred time of day based strategy, all in C#. In my thesis report, I go in depth on each of these strategies, explaining the philosophy behind the strategy, delving into the code that makes up the strategy, and discuss the backtest results. The report also discusses the history of algorithmic trading, and explores some future research aspirations of mine.

NASA Psyche - Capstone Project

Tempe Gaming Teamwork | Psyche Mission Capstone

My senior year at ASU, I was placed on a Capstone team whose job was to complete a project for NASA's Psyche Team. Our Capstone team was assigned to create two simulations for NASA Psyche's Inclusive Mindset course, which aims to inform users about the benefits of diversity and teamwork in the workplace. These simulations are meant to engage the users, giving them a hopefully more appealing way to learn the lessons being taught in the course. Throughout the year as a team we worked in sprints using Java and Javascript to develop these simulations.

Extra Curricular:

Member of ASU Artificial Intelligence Club, captain of intramural basketball team at ASU, member of the ASU Outdoor Club. Played basketball for La Cueva all four years of high school. Elected by coach and team to be co-captain of Varsity basketball team. Also played in the school orchestra, and was a member of Spanish honors society.