

Alex Barajas

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PERSONAL PROJECTS:

Ideal Weekly Iron Condor

- Software program using Python to process the price and risk in an iron condor to provide weekly income of 12% to 20% of margin used with an 80%+ chance of profit
- Calculate the greek derivatives (Delta, Gamma, Theta, Vega, Rho) for a set of options from the TD Ameritrade options chain application programming interface (API)
- Implement every Monday morning to select the strike prices nearest to the hypothetical estimates for an iron condor expiring the upcoming Friday to provide weekly income with an 83% chance of profit in 2020
- Resulted in an average of \$670 profit per week in 2021 up to December 2021 from the iron condors

Stock Analysis Tool

- Perform quantitative analysis on stocks of your choosing using a Python program with the Pandas library
- Compare metrics such as cumulative return and stock volatility over the past 100 trading days
- View visual graphs indicating technical analysis for the selected stocks in a Jupyter notebook
- Used to find buy and sell points in stocks that are used for long-term investing

Net Worth Estimator

- Imports financial data from various APIs for assets such as stocks and crypto and plots it using the Matplotlib library
- Extracts data from a website that does not have an API using the requests module and the Beautiful Soup library
- Uses the NumPy library to estimate your future net worth based on prior data that is analyzed using machine learning

WORK EXPERIENCE:

Tinkeroo, *Software Engineer*, Remote 01/21 - Present

- Conduct data analysis for 300+ users of the Hop Royale mobile game using Python and the Pandas library
- Model weekly user retention trends for 12+ Hop Royale game levels using Python and the Jupiter Notebook
- Develop models based on data obtained from the 12+ game level APIs and report findings to the lead engineers

Partner Engineering and Science, Inc., *Staff Assessor*, Remote 08/19 - 01/21

- Made a Python program using the Tkinter graphical user interface (GUI) library that provides the template for 12-15 monthly risk management reports which save an average of 6 working hours per financial report

Property Solutions, *Assistant Project Manager*, Edison, NJ 09/18 - 08/19

- Appraised the internal and external systems of a \$5M to \$100M+ real estate investment trust (REIT) subject property that need replacing and or renovating within the given time, scope, and cost of the project

EDUCATION:

Stevens Institute of Technology, Hoboken, NJ 08/14 - 05/18

Bachelor of Science in Mechanical Engineering

GPA: 3.61/4.0

Eco Car Senior Design Project, *Project Manager*, Hoboken, NJ 08/17 - 05/18

- Constructed the carbon-fiber body for a car that is powered using a hydrogen fuel cell to be used in the Shell Eco-Marathon race using SolidWorks to have a drag coefficient of 0.13 and a top speed of 27 MPH

SKILLS AND INTERESTS:

- **Skills:** Python, SQL, Swift, HTML, JavaScript, jQuery, Node.js, EJS, React, MongoDB, Matlab
- **Languages:** English (Fluent), Spanish (Fluent), Japanese (Novice)
- **Interests:** Exercising, language learning, traveling, making music, denim, sneakers, reading, stock trading