MUHARREM BOZTEPE

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Skills   JavaScript, Python, React.js, Redux.js, Ruby, Ruby on Rails, HTML5, CSS, Git, PostgreSQL, MongoDB, AWS, Bloomberg

Projects

Crypto Markets Monitor (Python, Streamlit, Scikit-Learn, Plotly, REST)   Live Site | Github
A relative value analysis tool for crypto currency markets, built with Python
- Utilized Python pandas as a data store to fetch historical daily crypto currency close prices as well as live quotes. Using pandas enables me to integrate the Scikit-Learn library directly and create model-based predicted prices in the same python file
- Implemented Streamlit library for user interface and Plotly for relative value analysis graphs
- Constructed a prediction model based on Unsupervised Learning algorithm-Principle Component Analysis(PCA), similar to what I used for relative value analysis in interest rates markets at Morgan Stanley

Mebook (Ruby on Rails, React, Redux, HTML, CSS, PostgreSQL, AWS)   Live Site | Github
A Facebook clone where users can post and connect with their friends
- Implemented React structure for user interface and incorporated with Redux store to share states across components
- Reduced PostgreSQL database calls using 'includes' active record method and avoided the N+1 problem using lazy loading
- Connected Rails Active Storage to AWS S3 infrastructure to upload user profile pictures

Rising Sign (MongoDB, Express, React, Node)   Live Site | Github
A dating app matches based on zodiac sign, inspired by Tinder, built with MERN stack
- Utilized MongoDB flexible document schema to change database quickly during development, built a RESTful API for client-server interaction
- Collaborated with other engineers in the team using Git and worked with separate feature branches to increase productivity
- Leveraged async thunk actions in dispatching to facilitate instant rendering performance in unmatch/like buttons in the feeds

Pacman (JavaScript, Canvas, HTML5, CSS)   Live Site | Github
An interactive single-page JavaScript Canvas game inspired by Pacman
- Implemented HTML Canvas to render 2D shapes and designed custom functions for interactions between Pacman and surroundings
- Facilitated static tile map array structure in Canvas to have an easily customizable game layout
- Optimized Pacman moves using Canvas transform and rotate methods which enable it to generate all rotations using a single image

Experience

Self Employed
Decentralized Finance(DeFi) Consultant / High Frequency Trader   Jan 2022 - Jul 2022
- Provided consultancy to a VC backed seed funded DeFi startup to build treasury and asset management operations. Created risk neutral yield strategies in both DeFi and Centralized Finance(CeFi) space to generate stable returns
- Integrated a Turkish local crypto exchange to open source market-making project with Python and Cython using Websockets, tested liquidity mirroring between global future exchanges vs local spot exchanges

Morgan Stanley
Emerging Markets Rates and FX Trader, Vice President   Sep 2013 - Dec 2021
- Took proprietary positions in the range of instruments as per CEEMEA rate desk mandate and market-making on interest rate swaps. Generated highest profit among CEEMEA rate team in 2019, second highest profit in 2020, and third highest in 2021
- Identified inefficiencies in Morgan Stanley electronic pricing systems and developed a new curve pricing model with quant teams. This provides more competitive pricing to electronic trading clients achieving a significant increase in trading volume
- Utilized unsupervised learning algorithm-Principle Component Analysis(PCA) to Morgan Stanley's proprietary risk system for monitoring of CEEMEA desk portfolio exposures
- Improved Morgan Stanley's local currency market presence in the US and Asia client franchises. Ranked third in the OTC Swap Brokers survey for Turkey rate market-making flows and trading volume

Education

App Academy   Jul 2022 - Nov 2022
Immersive software development course with a focus on full stack web development

Bogazici University, Istanbul
Bachelor of Science, Electrical & Electronics Engineering   Sep 2005 - Jun 2010
- Amongst the top 15 (over 2 million students in Turkey) in the national university entrance exam
- Merit-based scholarship throughout the entire university period awarded to only the top students by the government