Marko Mekjavić

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https://github.com/Pompey21

Education

University of Edinburgh (May 2022)
BSc (Hons) Computer Science : First Class

Bežigrad Gymnasium (June 2018)
International Baccalaureate : 38/45

Languages

Slovenian • Croatian • English • Serbian • Spanish

Programming skills

Python • SQL • Java • Haskell • Javascript

Experience

Credit Risk Technology Intern at JP Morgan • June - August 2021

- Developed Assistive Chat Bot for internal trading platform system, using various Natural Language Processing techniques. By speaking to the bot directly, instead of the designated support team, has decreased the required time by half. Bot provides traders with the necessary data analysis as well as an estimated time of arrival of various reports and market updates, all of which can be sent to users via internal chat system.

Data Scientist Intern at Gen-I • July - August 2020

- Developed various trading algorithms for algorithmic trading of different energy derivatives, ranging from hedging algorithms to minimise risk exposure, to algorithms for wind energy trading by looking at the movement of wind and weather forecast to predict production capabilities of wind and solar farms.
- Prepared data analysis for different projects, which included implementation of various data mining techniques, including web scrapping for building language corpus as well as retrieving and filtering data from relational databases using SQL.

Web-Dev Intern at InfinCUBE • May - June 2020

- Implemented new and maintained existing client-facing features, requiring coordination between front-end and back-end teams as well as the clients. This demanded a lot of creative out-of-the-box thinking in order optimise solutions and satisfy all stakeholders involved.
- Worked on a large legacy code base and rewrote some important methods while also introducing new functionalities to our internal REST API systems, which were used in various projects.

Personal Projects

Construction of a Neural Network

- Built a three layered neural network with one hidden layer for binary classification detecting location of object in a two-dimensional space. Implemented two different sets of neurons using both a simple step and a sigmoid functions and calculating the appropriate weights.

One for Alvin and the Chimpmunks

- Built a model for hazelnut production and price prediction for different regions across the World. Used satellite data such as temperature, humidity and weather forecast for training the model.

Market-making Hedging

- Participated at a competition organised by a market-maker Optiver where we had to implement various hedging algorithmic strategies for trading with various derivatives, including options and futures. We learnt about risk assessment and how to solve complex financial problems using simpler methods.

Optimal Connect 4 Player

- Programmed an Optimal Connect 4 with a Twist Player in Haskell programming language. Used principles of zero-sum games and implemented classical minimax algorithm which I upgraded by implementing the alpha-beta pruning to decrease time complexity.

Morse Decoder/Encoder

- Implemented real-time Morse alphabet decoder & encoder using Python for purposes of decoding messages sent via radio. Used probability theory principles in order to account for noise in the signal and prevent it from damaging the message.