

Aaron Trelstad

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EDUCATION

Iowa State University, College of Liberal Arts and Science

Bachelor of Science in Computer Science

Bachelor of Science in Mathematics with Applications in Statistics

TECHNICAL SKILLS

Proficient: Python | Familiar: MySQL, HTML/CSS, JavaScript, C++

Frameworks/Tools: Flask, React, Tensorflow, Git

RELEVANT COURSEWORK AND SKILLS

Computer Science: Intro to Computer Science

Math: Multivariable Calculus

Statistics: Introduction to Probability and Statistics

PROJECTS AND EXPERIENCE

Innovate 120 | UX Design Internship

- I worked on the UpHealth team, focusing on improving addiction management using AI to analyze clinical, biometric, and other contextual data.
- Used Figma to model product designs
- Used **TensorFlow** to create a neural network to predict addiction risk level given patient data

Statistical Arbitrage Trading Algorithm | Independent Project

- Generates buy or sell signal based on the daily movement of GM and Ford stock prices
- Backtesting the method over 265 days returned 93.21% whereas Ford was -14.567% and GM was -15.84% during that time
- Actively trading with the fund for 14 days returned 3.51% whereas Ford was 2.36% and GM was 0.09%
- Used **Python** to create predictive models and do statistical analysis.

Notes Website | Independent Project

- Uses **Python**, **HTML**, and **Flask**
- Includes full Authorization allowing a new user to create an account and existing users to log in and logout
- Has **SQL** database that stores user data

Personal Website | Independent Project

- Uses **JavaScript** and **React.js**
- Responsive design
- Reactive Animations using **CSS** and **react-three-fiber**
- Deployed through Github Pages

Markov Chains and Monte Carlo Simulations on Google Stock | Independent Project

- Used **Python** to make Monte Carlo Simulations
- Used Markov Chains to find the probability of future stock movements and underlying patterns

Fareway Grocery Clerk | Part-Time Employment

- Stock shelves and collect inventory
- Communicated with customers