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Douglas Silverman

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Education

Amherst, MA — University of Massachusetts, Amherst — Expected Graduation: May 2021

- Major: B.S. Computer Science | Secondary Major: Mathematics | GPA: 3.26
- Undergraduate Coursework: Data Structures, Algorithm Design and Analysis, Computer Graphics, Machine Learning, Natural Language Processing, Linear Algebra, Abstract Algebra, Combinatorics and Graph Theory, Statistics I and II

Skills

- Programming Languages: Python, Java, JavaScript, C
- Machine Learning: scikit-learn, numpy, pandas, matplotlib
- Software: Visual Studio Code, git, GitHub, Eclipse
- Web Development: Vue.js, Angular.js, Node.js, MongoDB, Google Firebase

Work Experience

Web Development Intern — Coach & Crew | *Los Angeles, CA* — August 2019 – March 2020

- Learned Angular.js and Bootstrap in a week - recreated Google login page and created mock homepage for C&C
- Assisted in the development of a noSQL database using Google Firebase with a group of 8 others
- Collaborated cross-functionally using Slack and Skype to work with other in the UK, US East, US West, and China

Projects

Sentiment Analysis on COVID-19 Tweets | *Python, scikit-learn, numpy* — November 2020

- Retrieved a pre-labeled Dataset of ~40,000 coronavirus tweets between March and April of 2020
- Cleaned dataset by iterating a numpy array of tweets and removing invalid characters like emojis
- Converted each tweet into a vector of terms (words) using a TF-IDF vectorizer
- Trained Naive Bayes, Logistic Regression, Random Forests, and VADER from scikit-learn using the TF-IDF vectors
- Evaluated each classifiers performance on cleaned test dataset - VADER and Logistic Regression performed best

Analysis of Sports betting Strategies | *Python, pandas* — March 2020 - October 2020

- Simulated amateur betting strategies by created models and testing them on 3 seasons of play across 3 sports
- Models: Martingale and Oscar's Grind which reduce losses - Kelly Criterion that maximizes profit 2 Poisson Distribution models that predict winners of every game
- The datasets were cleaned to normalize team names (some teams change cities) and to remove invalid entries
- Plotted the profit over time for each strategy using matplotlib and results analyzed in final report

Alpha of Web App - startup | *Vue.js, Bootstrap, Google Firebase* — February 2021 - Present

- Collaborated with another student living in India to design entire web app from the ground up
- Agile project management to seamlessly build app across a 10.5 hour time zone difference during Quarantine
- Designed NoSQL database to store users and user data as JSON objects for Realtime updates and display
- Implemented user registration and authentication, user post/followed posts, cloud messaging

Leadership Experience

Captain of UMass Ultimate Frisbee Development team — September 2019 - May 2020

- Managed logistics of practice, taught key strategies, developed young and new players