Jack Seymour

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Summary

Computer Science student with hands-on experience in software development and quality testing. Contributed to optimizing code efficiency using Python and conducted rigorous testing to enhance product performance. Demonstrates strong analytical skills and effective communication through detailed reports and presentations. Ready to leverage expertise in Python, SQL, and data analysis to support decision science initiatives and drive business value.

Education

Loyola Marymount University **Aug 2021 - May 2025**

Bachelor of Science, Computer Science, minor in Business Administration

- **GPA:** 3.7 CS Department & 3.6 Overall
- **Coursework:** Machine Learning, Probability and Mathematical Statistics, Algorithms and Analysis, Artificial Intelligence, Languages and Automata, Data Structures and Applications, Web Application Development, Logic and Computer Design, Operating Systems, International Business, Financial & Managerial Accounting

Experience

Kotini **Mar 2024 - May 2024**

Software Development Internship *London, England*

- Contributed to an innovative startup transforming the UK home-buying process by enhancing the existing codebase with a new Python library with additional functionality to increase efficiency.
- Developed and executed Cypress tests for an upcoming software release, documenting results and debugging errors to support agile development and optimize performance.

Projects

Sentiment Analysis & Supervised Machine Learning Model

- Gathered and preprocessed 330 movie review tweets to create a labeled dataset for training.
- Tested sentiment classification with 70 held-out tweets, analyzing accuracy and misclassifications.
- Applied Scikit-learn Support Vector Machine (SVM) with hyperparameter tuning to balance class distribution.
- Reported results, highlighting most frequently used words in positive vs. negative reviews for additional insights.

Gaussian Process for Fraud Detection

- Applied Gaussian Processes to a credit card fraud dataset, achieving 97% recall.
- Independently studied the topic and presented it to a Machine Learning class modeling the uncertainty and each predicted class probability with visualization.

Phoneme Classification for Speech Recognition

- Built validation from scratch by implementing k-fold cross-validation without external libraries, ensuring robust model evaluation for phoneme classification in Automatic Speech Recognition (ASR).
- Developed and compared Perceptron and Logistic Regression classifiers to distinguish vowel phonemes using TIMIT corpus audio data, processing 61-dimensional feature vectors.
- Applied data preprocessing techniques, including feature standardization, to enhance classifier performance and analyzed model accuracy across 10 trials of 10-fold cross-validation.
- Engineered a custom cross-validation pipeline, optimizing regularization techniques (L2) and hyperparameters to improve predictive accuracy and generalization.

AI Outfit Generator

- Led development of a Swift-based AI outfit generator using an LLM and Firebase.
- Built an interface for users to upload clothing, generate outfits from their digital closet, and visualize selections with digitally edited images, enabling swipe-based outfit curation.

Entrepreneurship Project **May 2023**

BEST Bootcamp

- Collaborated with Business and Engineering students to develop data-driven solutions for consumer products.
- Contributed to an Entrepreneurship project, leveraging data analytics to create an AI-powered skincare curation tool that customized product recommendations based on customer skin tone data.

Skills

- **Programming & Development**: Python, SQL, R, React.js
- **Data Science & Analytics**: Scikit-learn, PyTorch, Statistical Methods, Data Analysis, Databases
- **Cloud & Tools**: Google Cloud Platform, Microsoft Office
- **Communication & Presentation**: Effective Presentation, Public Speaking, Clear Communication of Technical Concepts