Justin Kim

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EDUCATION & CERTIFICATIONS

University of Wisconsin Madison | GPA: 3.7   **Expected Graduation: May 2026**
Bachelor of Science in Computer Science, Minor in Data Science   *Madison, WI*
- **Courses:** Data Structures & Algorithms, Data Science Modeling, Linear Algebra, Calculus 2, Discrete Math

Meta Backend Developer | *Coursera Professional Certificate*   **June 2024**

PROFESSIONAL EXPERIENCE

Machine Learning Engineer   **Jan 2024 - Current**
Astro AI Trading   *Remote*
- Led the sentiment analysis branch, implementing daily scraping routines using BeautifulSoup to collect financial news and social media data from over 1,400 sources, automating data integration into analysis pipelines, and determining source reputation using SimilarWeb API metrics such as views, shares, and bounce-rate.
- Developed and fine-tuned sentiment analysis models using FinBERT and VADER, achieving 82% accuracy in sentiment classification for financial news articles and social media posts.
- Implemented BERT embeddings, PCA for dimensionality reduction, KMeans clustering, PySpark, and cosine similarity for article similarity and weight assignment, enhancing clustering accuracy to 77%.
- Utilized TF-IDF vectorization with spaCy for Named Entity Recognition (NER) to extract and analyze key entities from large volumes of financial text, enhancing the relevance of market predictions.
- Accurately predicted stock prices for various time periods using a RandomForestRegressor model with hyperparameter tuning via GridSearchCV, achieving an average R^2 score of 98.7% across numerous stocks.
- Supervised a team of 3 employees, ensuring high code quality and maintainability through Git for version control and regular code reviews, providing direct oversight, mentorship, and performance evaluations.

Undergraduate Machine Learning Researcher   **July 2024 - August 2024**
Informatics Skunkworks   *Madison, WI*
- Developed ML models with Scikit-learn, TensorFlow, and PyTorch, enhancing accuracy and decision-making.
- Utilized NER with spaCy to extract key entities from engineering datasets, increasing relevance of findings.

PROJECTS

[ML Movie Review + Recommendation App](#) | *Django, React, JWT, Scikit-Learn, PostgreSQL*   **[GitHub Code](#)**
- Developed a dynamic movie review platform with React and Django, providing instant search, recommendations, saving, and rating, with backend deployed on Heroku and frontend on Vercel.
- Engineered a high-precision recommendation system leveraging scikit-learn's cosine similarity, achieving 85% accuracy in delivering personalized movie suggestions based on user ratings.
- Implemented JWT authentication and optimized RESTful APIs for secure, efficient traffic handling.

[Bargain: Sip and Save (IOS App)](#) | *Swift, MongoDB Atlas, Firebase*
- Fully took over and enhanced an iOS app for local bar deals, achieving a 5.0 App Store rating, growing the user base from 80 to 300+ through strategic ads, social media, flyers, and word-of-mouth campaigns.
- Improved data management with MongoDB Atlas and Firebase for secure real-time updates.
- Developed and streamlined a website for bar owners to manage deals, hosted on S3.
- Collaborated with over 10 businesses, assisting in account setup and deal management.

TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, HTML5, CSS, R, C++
Libraries/Frameworks: Pandas, NumPy, Matplotlib, Sci-kit Learn, PyTorch, PostgreSQL, ReactJS, Django, Bootstrap
Developer Tools: Git, Docker, AWS