619 Pole Line Rd, Apt 230
Davis CA 95618

Andy (Jun Ha) Lee

(530) 750-9245
andyjhlee0530@gmail.com

Education

University of California, Davis **Davis, CA** **September 2024**

- B.S. in Computer Science, Minor in Statistics
- Dean's Honor List: Spring 2019, Winter 2022, Winter 2023
- Related Coursework: Machine Learning; Artificial Intelligence; Computational Linguistics; Algorithms Design & Analysis; Statistical Data Science; Programming Languages; Sampling Theory; Vector Analysis

Employment

Amazon **Software Development Engineer, Intern** **Summer 2023**

- Developed a Random Forest ML recommender that accurately predicted user engagement for over 80% of cases, enhancing user experience
- Engineered a machine learning recommendation pipeline leveraging AWS services, including SageMaker, S3, Lambda
- Utilized Spark to preprocess customer engagement data, optimizing it for use in the ML content recommender

Technical Projects

Game AI Optimality and Efficiency Research

- Implemented Minimax, Expectimax, and MCTS algorithms for AI in a checkers game interface
- Enhanced the efficiency of Minimax AI by incorporating alpha-beta pruning, leading to a significant reduction in a computational overhead
- Developed a game-specific evaluation function, integrating Chebyshev distance and vertical cost considerations, to accurately asses the current game state
- Conducted research demonstrating the superior optimality of Expectimax AI in stochastic environments compared to Minimax AI, witha focus on balancing the tradeoff between efficiency and optimality

ML-Based Model for Hotel Reservation Cancellation Prediction

- Developed and fine-tuned machine learning models to predict hotel reservation cancellation using customer booking data
- Explored multiple algorithms including Neural Net Model and Logistic Regression
- Performed data preprocessing, feature engineering, and hyperparameter tuning to enhance model performance
- Evaluated models based on precision, recall, and accuracy metrics, with a focus on improving predictive accuracy

Comprehensive Statistical Analysis of Dietary Impact on Health Using R

- Analyzed the Nutrition Study dataset with 315 subjects to explore relationships between dietary intake, health status, and lifestyle factors
- Investigated the correlation between dietary beta carotene and plasma retinol using Spearman's rank correlation
- Compared dietary variables and health status across smoker groups and between genders using Kruskal-Wallis and Mann-Whitney-Wilcoxon tests
- Performed statistical analysis using R, including Shapiro-Wilk tests for normality and non-parametrics tests for group comparisons

Additional Experiences

- **Instructor (2018 – 2021):** Taught highschool and SAT mathematics, physics, and chemistry
- **Satellite Operator (2019 - 2021):** Operated and managed satellite communication channel for the ROK Army

Languages and Technologies

- AWS SageMaker; TensorFlow; Pycharm; Scikit-learn; Keras
- Python; C++; C; Java; R; SQL; JavaScript; JSON