Harry Hong

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Summary

A self-driven rising junior majoring in computer science at UNC, proficient in using software and computing languages, with hands-on experience in project management, seeking an internship position in the summer of 2024.

- **Project Leadership and Team Synergy:** Successfully led a diverse project team, fostering cross-functional collaboration and integrating each member's unique strengths to achieve goals.
- **Technical Skills:** Python, Pascal, Java, HTML, CSS, JavaScript, NLTK, Microsoft Office Suite, Google Suite

Education

University of North Carolina at Chapel-hill Chapel-Hill, NC

Bachelor of Science in Computer Science Expected May 2025

GPA: 3.57/4.0

Courses: Data Structure, Operation Systems, Computer Science, Linear Algebra, Discrete Math, Calculus, Optimization

Project Experience

JavaFX Puzzle Game Implementation (Java) | *Chapel Hill* December 2023

- Developed a JavaFX puzzle game using MVC architecture, ensuring the separation of concerns, and created a responsive and visually appealing UI with interactive cell types (clue, wall, corridor) and dynamic lamp placement
- Implemented puzzle-solving logic, with lamps illuminating corridors and displaying success messages, and designed and structured the view package using the FXComponent interface for modularity and efficient UI component management
- Integrated a puzzle library with navigation features and improved the UX of a JavaFX puzzle game through thorough manual testing and adjustments to the controller and view components, showcasing expertise in Java and MVC design principles

Simple Shell Implementation (C) | *Chapel Hill* December 2023

- Designed and implemented a Unix-like shell, demonstrating proficiency in process control using fork, exec, and wait
- Utilized getenv to access system environment variables, notably the PATH variable, for locating executable files
- Implemented memory allocation, user input parsing, and command execution, handling both built-in and external commands
- Conducted thorough testing, including manual and automated test cases, to ensure robust functionality

Predictive Analysis of Data Scientist Job Change (Python) | *Online* July 2023-August 2023

- Utilized Python to predict job change willingness by supervised machine learning models, including random forest, XGBoost, and KNN
- Performed data visualization in Matplotlib and Seaborn on feature correlation to identify needs for preprocessing
- Used data preprocessing procedures, including missing value imputation, feature encoding, and normalization by Scikit-learn
- Tuned the ML model and achieved a 5% increase in the recall on the prediction of minority

Sentiment Analysis of New York Times Articles (Python) | *Online* July 2023-August 2023

- Leveraged the New York Times **Python API** to retrieve and sanitize 1000+ articles' data
- Segmented **JSON** news content from API responses and implemented Elasticsearch to enhance querying capabilities, focusing on articles related to Big Tech
- Utilized natural language processing techniques to tokenize, remove stop words, and stem meaningful words using the NLTK library, preparing the data for sentiment analysis
- Enhanced the **VADER** sentiment analysis model by customizing its lexicon to incorporate COVID-related tokens, accurately reflecting shifts in public emotions during the pandemic

Android App Development | *Prof Ma Li* **|** *Online* December 2022-Jaunary 2023

- Developed an App by **Android Studio** to import items as a shopping cart, calculate the price, and display items
- Implemented a Java program to initialize the shopping cart and items classes, including add and remove items

Extracurricular Activities

Cybersecurity Club | *Chapel Hill, NC* August 2022-December2022

- Attended weekly seminars related to hacking and cybersecurity and learned software skills including Netcat, Nmap, fiddler, etc., and became more acquitted with hacking ethics
- Cooperate with peers to practice skills in bash shell scripting, reverse engineering, and social engineering attack