Lulu Sun

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EDUCATION

Case Western Reserve University, Cleveland, OH
Aug 2023 – May 2025
M.S. Computer Science, GPA: 4.0
Coursework: Data Mining, Database Systems, Algorithms, Data Science, Software Engineering, HPC, Mobile Security

Northwestern University, Evanston, IL
Sept 2014 – June 2018
B.S. Chemical Engineering, Minor in Biotechnology and Biochemical Engineering

SELECTED PROJECTS

"Choo-Choo Zoo"
Aug 2023 – December 2023
Developer, Project Manager | Unity Game Engine, C#
- Delivered and published therapy-focused video game paired with custom controllers for children with cerebral palsy and traumatic brain injury featuring a 3D experience riding on a train through a zoo to feed and interact with various animals, play musical instruments, and listen to an animated storybook
- Exceeded client and stakeholder expectations by leading a team of 6 developers to incorporate user feedback, maintaining high standards for inclusive design, and partnering with 2 nonprofits and 10+ healthcare professionals
- Presented the final project at the annual Game Expo to a panel of 6 judges and 30+ event participants, receiving overwhelmingly positive feedback from experts on its accessibility focus
- Published game on *itch.io* and submitted it to Project WHEELS, a research initiative in collaboration with medical professionals and nonprofits
- Designed and implemented the main menu, settings menu, navigation, reward tracker, and interactive tutorial minigame

"Lilock"
Jan 2025 – April 2025
Developer | Android Studio, Kotlin, SQLite
- Designed and implemented a secure Android application for writing personal notes by employing high-level security algorithms
- Implemented object-oriented programming design for handling data manipulation, secret key generation, and encryption
- Applied secure methods for encryption and hashing by integrating PBKDF2-HMAC-SHA512 for securing user data into CRUD operations for SQLite and storing hashing keys securely with Android KeyStore

Movie Recommender
April 2024
Python
- Developed a machine learning-based movie recommender system using collaborative filtering with the K-Nearest Neighbors algorithm to generate customized recommendations, supporting both user-based and item-based strategies
- Conducted hyperparameter tuning and 5-fold validation to optimize model accuracy; performed comparative analysis of user-based vs item-based strategies and cosine similarity vs Pearson correlation
- Integrated data pre-processing, model prediction, evaluation, and visualization tools into a reproducible pipeline in Jupyter Notebook workflow

LEADERSHIP & VOLUNTEERING

Great Lakes Christian College Summer Retreat
Cleveland, OH
Volunteer Coordinator
June 2023 – Aug 2023
- Successfully managed a team of 6 core volunteer kitchen staff and over 20 part-time volunteers during a week-long retreat. Oversaw kitchen opening and closing procedures, ensured timely and efficient food preparation, and delegated tasks across prep, service, and cleanup shifts
- Fed 150 participants by developing and implementing unique menus for 15 meals, incorporating approximately 20 healthy recipes emphasizing simplicity and cost-efficiency. Created an effective spreadsheet for inventory management and a comprehensive schedule outlining key tasks, meal preparation checkpoints, and volunteer shift rotations

Journey Learning Studio, *Introduction to Computer Science Principles*
Seattle, WA
Instructor
June 2022 – Aug 2022
- Taught programming fundamentals to 10 middle-school students, focusing on Scratch and Python. Introduced primitive types, conditional statements, and loops, with an emphasis on critical thinking
- Designed a tailored 8-week curriculum of comprehensive lecture content, homework, and engaging end-term projects
- Received very positive feedback from students, demonstrating the effectiveness of the curriculum for fostering learning

SKILLS

Languages: C, Python, C#, R, Kotlin, Java, JavaScript, MATLAB, HTML, CSS, SQL, Ruby
Development tools: Git, GitHub, Visual Studio, Visual Studio Code, Unity, Flask, Django, React, NodeJS, Android Studio