JIAWEI (JAY) CHEN

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◇ Google Scholar ◇ Linkedin ◇ GitHub

EDUCATION

University of California, Berkeley   **Present - May 2024**
B.A. Computer Science   *Berkeley, California*
Core Courses: *GPA 3.49*
Efficient Algorithms and Intractable Problems, Optimization Models in Engineering, Introduction to Artificial Intelligence, Computer Security, Data Structures, Concepts of Probability

WORK EXPERIENCE

Research Assistant   **Sep 2022 - Present**
Kennesaw State University, Dr. Yixin Xie's Lab   *Kennesaw, GA*

- Applying and Optimizing Machine Learning Algorithms (random forest, GNN, etc.) in biological data analysis
- Developing tools (Shell script) to perform Molecular Dynamic simulations, increased calculation speed by 80%

PROJECTS

Pacman AI   **Sep 2023**

- Used Advanced Algorithms to find the optimized route to escape the maze and eat all the dots

Machine Learning Projects   **July - Aug 2023**

- Specified and fitted linear regression model to predict housing prices ($\approx 85\%$ accuracy)
- Classified junk and ham emails by a binary classifier ($\approx 85\%$ accuracy)

Currency Exchange   **Apr 2023**

- Wrote a Python program to calculate real time exchange amount
- Web scraped and regex currency ratio in time-sensitive

Protein Data Visualization   **July 2021 - Mar 2023**

- Developed a Python visualization tool to present and colorize proteins' sequence
- Compared and aligned protein 3D structures
- Wrote a shell script to automatically colorize key residuals (salt bridges, h-bonds) by the occupancy

"Plants vs Zombies"   **Oct 2022**

- Wrote a Python game to replicate the "Plants vs Zombies"

PUBLICATIONS

[1] Computational Study on DNA Repair: The Roles of Electrostatic Interactions between Uracil-DNA Glycosylase(UDG) and DNA. Xie, Y., Karki, C. B., **Chen, J.**, Liu, D., & Li, L. (2021). Frontiers in Molecular Biosciences, 8, 681.

[2] Using a comprehensive approach to investigate the interaction between Kinesin-5/Eg5 and the microtubule. Guo, W., Sun, S., Sanchez, J. E., Lopez-Hernandez, A. E., Ale, T. A., **Chen, J.**, ... & Li, L. (2022). Computational and structural biotechnology journal, 20, 4305-4314.

TECHNICAL SKILLS

Programming Language: Java, Python, Go, C++, C, Assembly Language, Shell Bash Script, etc.
Framework and Tools: JUnit, Git, Matlab, SQL, Latex, etc.
Technical Skills: Software Engineering, Data Analysis, Technical Writing, etc.
Soft Skills: Communication, Innovation, Critical Thinking, Patience, Time Management, Teamwork, etc.