(No Visa Sponsorship Needed)

Jiawei Chen

+1(310) 940-2108 — imjwchen@gmail.com — Atlanta, GA, 30066
Google Scholar: g.co/kgs/JS3JwN9 | linkedin.com/in/jaychen01 | github.com/JC01111 | jc01111.github.io/me

EDUCATION

University of California, Berkeley **Aug 2020 - May 2024**
B.A. Computer Science (GPA 3.4/4.0) *Berkeley, California*

WORK EXPERIENCE

Software Engineer Intern **Dec 2023 - Feb 2024**
Hu'nan Creator Information Technologies Corporation Limited *Hunan, China*

- Developed and maintained software solutions for smart city projects, focusing on front-end and back-end development.
- Collaborated with cross-functional teams to design and implement new features in educational and healthcare applications.

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

- Apply and Optimize Machine Learning Algorithms (random forest, GNN, etc.) for biological data analysis.
- Write Shell Bash Scripts to perform Molecular Dynamic simulations, **increasing calculation speed by 80%** compared to traditional workflows.

PROJECTS

Machine Learning Projects (Python) **July 2023 - May 2024**

- Developed a Convolutional Neural Network (CNN) to classify CIFAR-10 images with 85.3% accuracy, ranking in the top 3% in Kaggle competition.
- Performed data cleaning and built a Random Forest model to predict Titanic survival with 82% accuracy, ranking in the top 5% in Kaggle competition.
- Implemented Recurrent Neural Network (RNN) and Neural Network to classify digits and language identification.

Database Management System (Java) **March 2024**

- Implemented transaction management systems to ensure ACID properties and handle concurrency control.
- Worked on indexing mechanisms and SQL query optimization, leading to a 20% improvement in performance.
- Implemented the ARIES recovery algorithm to ensure robust database recovery and fault tolerance.

Pac-Man AI (Python) **Sep 2023 - Dec 2023**

- Developed advanced artificial intelligence algorithms (A*, Markov Decision Process, Reinforcement Learning, and Machine Learning) to optimize Pac-Man's path in the maze for efficient pellet collection while evading ghosts.
- Implemented Bayes Nets and Hidden Markov Models (HMMs) to accurately track the position of ghosts using noisy sensor data, and utilized Particle Filtering to enhance Pac-Man's decision-making process under uncertainty.

File Sharing System (Go) **July 2023**

- Developed a secure file sharing system that allows users to log in, store files, and share files with other users, even in the presence of attackers.
- Implemented robust security features using databases and keystores to store information and encryption keys.
- Employed advanced cryptographic techniques such as HMAC and SHA-512 to encrypt and tag critical data.

PUBLICATIONS

[1] **Chen, J.**, Chen, L., Quan, H., Lee, S., Khan, K. F., Xie, Y., ... & Xie, Y. (2024). A Comparative Analysis of SARS-CoV-2 Variants of Concern (VOC) Spike Proteins Interacting with hACE2 Enzyme. *International Journal of Molecular Sciences, 25*(15), 8032.

[2] **Chen, J.**, Potlapalli, R., Quan, H., Chen, L., Xie, Y., Pouriyeh, S., ... & Xie, Y. (2024). Exploring DNA Damage and Repair Mechanisms: A Review with Computational Insights. *BioTech, 13*(1), 3.

TECHNICAL SKILLS

Programming Languages: Java, Python, Go, C/C++, Assembly Language, Shell Bash Script
Frameworks and Tools: AWS, Azure, GCP, Databricks, Docker, Git, SQL, NoSQL (MongoDB), Linux
Others: Agile Methodology, System Design, Matplotlib, Tableau, Scikit-learn, pandas, NumPy, PyTorch