Derui (Derek) Wang

+1 (510)-982-5319 | derekderuiwang@berkeley.edu | linkedin.com/in/derekderuiwang | github.com/DerekW00

EDUCATION

University of California, Berkeley   Dec. 2023
Bachelor of Arts in Computer Science, Data Science, and Economics   *Berkeley, CA*
- **Relevant Coursework:** Database Systems, Algorithms, Computer Architecture, Artificial Intelligence, Machine Learning, Inferential Model, Computer Security, Human-Computer Interaction

SKILLS

Languages: Python, Java, Go, C, C#, RISC-V, SQL, HTML/CSS/Javascript, Swift
Tools/Frameworks: git, GCP, .NET, UNIX, Docker, scikit-learn, PyTorch, TensorFlow, Figma

EXPERIENCE

Software Engineering Intern   May 2024 - Present
Nano-Chore Chip Company   *Remote*
- Engineered and deployed machine learning models, including AlexNet, LSTM, RNN, ResNet, GPT-1, and BERT, to advance AIoT SoC chip functionalities
- Applied advanced quantization techniques to enhance AI chip performance, significantly boosting power efficiency and computational speed
- Partnered with a leading chip research and engineering team to facilitate the development and implementation of cutting-edge AIoT technologies, contributing to national key research projects and achieving record-breaking results at ISSCC

Software Engineering Intern   Oct. 2023 - Present
SYSTEX Corporation   *Remote*
- Developed and maintained a suite of Office add-ins (WordDNAFF, ExcelDNAFF, PPTDNAFF) using C# and .NET framework to enhance productivity and streamline workflows for users
- Implemented secure certificate management protocols for Office add-ins using PFX certificates and custom verification processes to ensure software integrity and security compliance
- Collaborated with the team to design and execute comprehensive testing and demonstration suites, resulting in a 20% reduction in deployment issues and increased user satisfaction by 15%

STEM Tutor, Athletic Study Center   Jan. 2020 - Present
University of California, Berkeley   *Berkeley, CA*
- Awarded 'Best Tutor' recognition for outstanding educational impact, as evidenced by positive feedback from advisors and numerous past students
- Provided tutoring in advanced subjects, including upper-division computer science, data science, probability, and econometrics courses

Research Assistant   Apr. 2021 - Sep. 2022
Stanford University Graduate School of Business, UNC Kenan-Flagler Business School   *Remote*
- Conducted advanced data analysis using Python and R, focusing on Behavioral Finance and Real Estate
- Developed and refined predictive models using machine learning algorithms, contributing to innovative research in Behavioral Finance; optimized models for accuracy and efficiency while ensuring data integrity and reliability

PROJECTS

Secure File Storage | *C, Go, Python, Fuzz Testing*   Jul. 2023
- Developed a secure storage and sharing system with Go, focusing on creating a decentralized solution for enhanced security and integrity
- Conducted extensive security testing, including fuzz testing, to validate system security against various threat models and to ensure the resilience of the file storage network
- Addressed scalability and performance by optimizing data structures and employing efficient algorithms, ensuring the system's ability to handle a large number of transactions
- Maintained atomicity and consistency of transactions to enhance the system's reliability

Database System Implementation | *SQL, Java*   Feb. 2023 - Apr. 2023
- Enhanced B+ Tree Indices in RDBMS: Engineered B+ tree indices for a relational database management system, programming critical functions
- Advanced Transaction Management: Implemented write-ahead logging in a database system, incorporating features like savepoints, rollbacks, and ACID-compliant restart recovery
- Concurrent Transaction Locking System Design: Developed a sophisticated database locking system to manage concurrent transactions to ensure utmost data integrity and consistency