CHENG ZHANG

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EDUCATION

North Carolina State University, Raleigh, NC
Master of Computer Science, August 2024 - May 2026(Anticipated)
Courses: Game Engine, Compiler, Architecture of Parallel Computing
University of Texas at Austin, Austin, TX   **GPA: 4/4**
Exchange Program in Software Engineering, June 2023- August 2023
Courses: Object Oriented Programming in Java, Software Project Management
Nankai University, Tianjin, China   **GPA: 3.82/4**
Bachelor of Engineering in Software Engineering, July 2020 - June 2024
Courses: Software Engineering, Design and Analysis of Algorithms, Machine Learning and Data Analysis,
Object Oriented Programming, Mobile Software Development, Java/C++/Python, Linear Algebra

SKILLS

Languages: Java, Python, JavaScript, C, C++, Selenium
Web Technologies & Databases & Libraries: HTML, CSS, Django; Oracle, MySQL; Pandas, NumPy,
Keras, TensorFlow
Frameworks & Tools: Spring Boot, REST API, Logback; Eclipse, SQL Developer, Tomcat, Maven, GIT,
Jenkins, AWS, Google Engine
Operating Systems: Linux, Windows, MacOS

WORK EXPERIENCE

Backend Developer, Nankai University, Tianjin, China   **Sep 2022 – Apr 2023**

- Developed backend features for learning, creation, and management platforms, and enabled cross-module service invocation via Eureka.
- Optimized deployment with Docker, improving migration and deployment efficiency.
- Wrote documentation for server deployment and project management, ensuring smooth onboarding and project visibility.

Game Development Engineer Intern, North Game, Dalian, China   **Sep 2023 – Dec 2023**

- Developed mobile games using a tech stack including Unity, C, Firebase, and Google Play Services, targeting the Southeast Asian market.
- Worked on simulation and script-killing games, contributing to mechanics and UI/UX improvements.
- Collaborated with the team to implement core game features and optimize performance for mobile platforms.
- Participated in launching games that achieved over 300,000 downloads on Google Play.

Research Assistant Intern, Duke University, Durham, NC   **July 2024 – Now**

- Developed strategies to enhance fairness in Federated Learning models while maintaining prediction accuracy.
- ocused on predicting income, lifespan, and housing prices with fairness across sensitive factors like gender, ensuring non-discriminatory outcomes.
- Designed a custom algorithm to generate synthetic datasets simulating private client data for training.
- Utilized Python, TensorFlow, PySyft, and SQL for data generation, model training, and fairness evaluation.

PROJECTS

WeChat Mini Program: Developed "Poetry Explorer" WeChat Mini Program, utilizing a cloud backend. Implemented key features such as poetry recommendations, search functionality, fill-in-the-blank poetry games, and a forum for discussions and comments. Leveraged a large poetry database to provide users with a rich, interactive experience. Utilized WeChat's class-Vue framework and cloud services for data storage and object management.

Deep Learning for General Game Playing:Assisted Professor Guifei Jiang at the General Game Playing AILab, Nankai University, in experiments involving Reinforcement Learning (RL) applied to General Game Playing (GGP). Focused on optimizing RL training to replace random search in Monte Carlo Tree Search (MCTS). Contributed to improving the efficiency of the RL models in a variety of game environments.