Peiling Cai

Austin, TX | (469) 332-1997 | cpl824@icloud.com
Fully authorized to work in the US. No visa sponsorship needed.

Education

- **Master's in Computer Science**   2021.9 – 2024.5
  Texas State University (San Marcos, TX)   GPA 3.83 / 4.0
- **Associate's in Computer Science**   2018.7 – 2021.8
  Austin Community College (Austin, TX)   GPA   4.0 / 4.0
- **Bachelor's in Business Administration**   2004.9 – 2008.6
  Southwestern University of Finance and Economics (Chengdu, China)

Experience

- **Travel Website Development**
  - Built a full-stack web application using the MERN stack following Agile process. Delivered an intuitive and engaging user interface, scalable operations, and efficient data storage and retrieval.
  - Delivered an intuitive and engaging user interface while designing scalable back-end operations with robust RESTful API for seamless communication between components and efficient data handling.
  - Employed rigorous testing methodologies at every stage (unit, integration, system testing) to ensure feature correctness, scalability, and efficiency in data storage and retrieval.

- **CTL model checker**
  - Constructed desk application in the MVC architectural pattern and implemented it in Java, leveraging an intuitive JavaFX graphical user interface.
  - Integrated sophisticated algorithms to decompose complex CTL formulas into ASTs, enabling efficient evaluation against Kripke structures through depth-first search and backtracking techniques.
  - Developed and executed comprehensive test cases and Generated a thorough test report focused on the evaluation results of CTL formulas against Kripke structures, demonstrating the application's robust verification capabilities.

- **Relational Database Design for Airline Management**
  - Concentrated on the sophisticated design and robust implementation of a relational database.
  - Performed extensive manual testing of database functionality, verifying the accuracy of the Entity-Relationship diagram to relational schema conversion, and ensuring correct data retrieval and integrity using Microsoft SQL Server.

- **Personal Task Management Application**
  - Built a web-based application using ASP.NET Core, Entity Framework, SQL Server, JavaScript, HTML, and CSS.
  - Designed back-end services with a well-structured RESTful API layer to enable efficient data retrieval and management, along with a responsive, user-friendly front-end interface.
  - Prepared a comprehensive test report demonstrating application robustness.

Work History

- **Operation Manager**   **Industrial and Commercial Bank of China**   **2010.4 – 2015.10**
  - Collaborate with IT department to provide new system requirements and test the iterations of the system.
  - Supervise business process and control operational risk.

Awards

- 2023 Computer Science Graduate Academic Excellence Award   Texas State University
- 2024 Computer Science Graduate Academic Excellence Award   Texas State University

Related Skills

Python, Java, C++, JavaScript, React, Linux, TCP/IP, Agile Methodology, Object-Oriented Design, MySQL, RESTful API, Manual Testing, Unit Testing, Test Case design, Jira