Yue Zeng

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EDUCATION

Duke University

Master of Electrical and Computer Engineering, Software Development Track *Aug 2021 - May 2023*

Xi'an Jiaotong University

Bachelor of Economics Major in Finance; Awarded XJTU University Scholarships from 2017 to 2019 *Sep 2016 - Jun 2020*

TECHNICAL SKILLS

Programming Language: C++, Java, C, HTML, JavaScript, CSS, Verilog, Python, Linux, Shell

Tools and Frameworks: Servlet, Vue, MyBatis, JDBC, Maven, Gradle, JavaFx, Junit, Linux, Git, Tomcat, FPGA

Database: MySQL, PostgreSQL, Druid

PROJECTS

Thread Safe Dynamic Memory Allocation and Deallocation Library Functions

- Utilized: C, Linux, Concurrency Programming.
- Implement memory allocation and deallocation library functions using Concurrency Programming, reaching high-speed performance and thread-safe and achieving 2K+ times executions in 1 second.
- Utilize Linux system calls to realize memory allocation strategy, reducing the data chunk segmentation rate by 10%.

Shopping Mall Brand Management System

- Utilized: Java, JavaScript, HTML, CSS, Vue, MyBatis, MySQL, Servlet, Tomcat, MVC.
- Design and develop a shopping mall brand management system, supporting brand updating, filtering, and querying.
- Create webpage presentations using JavaScript, Vue, HTML, and CSS supporting graphical interfaces and user interactions.
- Implement database queries with MySQL and MyBatis annotations to build up filtering functionality on the management system.
- Implement Servlet with HTTP protocol to make communication between the web browser and Tomcat server.

Choose Your Own Adventure

- Utilized: C++, Linux, Valgrind, OOP
- Design and create an interactive text-based story-making game, in which players read the story script and choose the character's action, and the outcome presents with choices path at the end of the game.
- Implement a text parser and text generator following OOP rules to parse options numbers and 40 pages story scripts.

Battleship

- Utilized: Java, Junit, Git, OOP, UML, Design Pattern, MVC
- Design and develop an interactive battleship game with player-to-player mode and robot-to-player mode, using UML diagrams to plan and control the developing process. Apply abstract factory and MVC design patterns to the code construction.
- Implement Junit to create unit tests for all 20 classes, achieving 100% path coverage for unit tests.

Hot Potato

- Utilized: C, TCP, Socket Programming
- Design and develop an object-passing game applying TCP protocols, building up client and server for each player.
- Implement socket programming to achieve connection, listening, and communication between processes.

Tetris Game

- Utilized: Verilog, FPGA, MIPS
- Design and develop the Tetris Game on an FPGA board, processing the player's input from the PS2 keyboard and presenting Tetris blocks and movements on screen with the VGA controller.
- Implement a single-circle processor with MIPS architecture, using Verilog assembly language to achieve computations for block boundary judgment, block rotation, and block rows elimination.

WORK EXPERIENCE

SAP

iXP program - Developer Intern *May 2022 – Jul 2022*

- Utilized: STEP, START, eCATT, ABAP
- Accommodate Agile development with Scrum framework. Plan, track and manage weekly tasks on Jira with teammates.
- Create 100+ START test cases and repair hard-coded cases using ABAP to improve reuses of cases. Track case status, construct test plan, and trigger module alerts to the developer using the eCATT system, improving module coverage rate by 6%.
- Develop automated testing scripts by STEP and eCATT and report results automatically to the quality engineers, improving the module pass rate from 70% to 85%.