Sitong Lu

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Summary

Second-year master's student majoring in Computer Science at University of Colorado Boulder and created a variety of Java/C++/C/HTML/Scala/Python/Kotlin-based programs with great enthusiasm over the past five years of studies, either as short solo projects of a few days or as semester-long group projects
Personal website with detailed project descriptions: https://akitomoya616.github.io/

Education

University of Colorado Boulder, **Master of Science - MS, Computer Science**   Expected May 2023
- GPA Achieved: 4.0 / 4.0 (Overall) with sub-plan: Software Systems and Cloud Computing Courses
- Graduate Courses: Computer Graphics, Data Mining, User-Centered Design & Development, Object Oriented Analysis and Design, Machine Learning, Foundations of Software Engineering
- Current Courses: Datacenter Scale Computing, Professional Masters Project

University of Colorado Boulder, **Bachelor of Arts - BA, Computer Science**   May 2021
- Other Major/Minor: Double Major in Mathematics; Minor in Program for Writing and Rhetoric (PWR)
- GPA Achieved: 3.74 / 4.0 (CS-related), 3.433 / 4.0 (Overall)
- Key Courses: Data Structure, Calculus 1 for Engineers, Calculus 2, Calculus 3, Computer Systems, Intro to Discrete Mathematics, Linear Algebra for Math Majors, Coding & Cryptography, Intensive Programming Workshop, Database Systems, Human-Centered Computing Professional Development, Principle of Programming Languages, Algorithms, Software Development Methods and Tools, Fundamentals of HCI
- Dean's List: Dean's List for Fall 2020 and for Spring 2021

Key Projects

Android Application, NewsMe, https://github.com/akitomoya616/NewsMe   May 2022 - Present
- Constructed primarily in Java. An Android application demo built through independent learning
- Implemented a variety of different functions practiced while self-learning, including navigation drawer menu, scrollable page, outer frame decorator, and API references (for getting daily weather data based on user's IP address)

Qt Board Game, Warped Souls, https://github.com/addzy94/ooad-project-game   Mar 2022 - May 2022
- Developed using Qt with Pyside. A 2D dungeon game (5-minute game) playable with mouse or finger on touch screen
- Generated enemy on board with Factory Pattern and each can move (1 sec/move) in unique logic (Strategy Pattern)
- Implemented Command Pattern to allow Player to move his/her avatar around on the board (Singleton Pattern) for at most 10 times per turn; Each action of a character is recorded in the text box (Observer Pattern)

OO Project Demo, Shop Simulator, https://github.com/addzy94/ooad-project-team   Jan 2022 - Mar 2022
- Coded in Java and applied with Object-oriented principle. A simulator operates two automated stores (Abstract Factory Pattern) for 30 days. Three-month long project for a three-person team, responsible for OO design patterns
- Automated daily tasks include clearing inventory, withdrawing cash, and selling/buying merchandise from customers
- Applied Command Pattern to allow users to shop/sell items in the store once per simulation
- Applied Decorator Pattern to allow each product sold or acquired to generate a preferential sales/resale price by being tied to specific product; The daily actions of the store staff are documented in the logger file (Observer Pattern)

OpenGL Project, Souls Simulator, https://github.com/akitomoya616/Souls-Game   Oct 2021 - Dec 2021
- Developed using OpenGL for the first time. An Indie demo of a 3D first-person perspective game
- Constructed with UI, transparent objects, sky box, collision detection, lighting effects produced by a modified shader, and illusory walls with animated textures. Managed to mimic the game scenario experienced in Souls games

Web with Database, BUFFiMG, https://github.com/SamFeig/BUFFiMG   Oct 2019 - Dec 2019
- Hosted on Heroku. A HTML website where users can log in with a registered account, upload and sort photos by tags
- Created the front-end web layout and rough algorithms for back-end database access and storage mechanism (add/delete/modify/search user pictures with tags using SQL database). Semester-long project for a group of six

Experience

Course Manager, University of Colorado Boulder CS Department   Boulder, CO, Aug 2021 - Dec 2021
- Serve as Course Manager for Fundamentals of Human Computer Interaction for one semester
- Employed to answer students' subject-related questions and summarizing the analyzed result for weekly reports to the professor. On-call since Slack was used for communication with students during Covid-19 pandemic

Course Assistant, University of Colorado Boulder CS Department   Boulder, CO, Sep 2019 - May 2021
- Served as Course Assistant for Starting Computing, Data Structure, and Principle of Programming Languages for 2 years
- Employed to answer students' CS-related questions, troubleshooting programs and providing students with a better understanding of the course and related code usage concepts on a weekly bases
- Tended to follow students' own ideas and find solutions fit for understanding, rather than all leading in the same way

Technical Skills
- Programming Languages: C | C++ | Java | JavaScript | Python | Kotlin | HTML | MySQL | OpenGL
- Technical: Qt | Android Studio | Heroku | Git | Intellij Idea | Jupyter Notebook