Ruixin Huang

hilaryruixin@berkeley.edu (510) 847-3326

EDUCATION

2016.8 - 2020.12 **University of California, Berkeley** Computer Science B.A

2016.8 - 2020.12 **University of California, Berkeley** Data Science B.A

SKILLS

Language: Java, C++, Python, SQL, HTML, Golang

Framework: Spring Boot, Bootstrap

Tools: Visual Studio, NumPy, Git, pandas, TensorFlow

PROJECT EXPERIENCES

Full Stack development of a video sharing WeChat Mini Program (Java)

Summary: Developed a video sharing Mini Program that allows a user to log in, post, like, comment and share videos without leaving the WeChat (a social media app) interface. Got thirty users after it was published online and was given positive feedback.

- Building a layered polymerization project using Spring Boot and provide RESTful API for front end development
- Building front-end development frame using Bootstrap
- Building distributed back-end management system using Zookeeper
- Managing user information using MariaDB
- Achieving front-end and back-end separation and tested on integrated tests.

Rendering Volumetric Scattering（C++）
https://github.com/hilary217/cs184-final

Summary: Implemented a renderer that considers the materials, environmental lights and the depth of field with acceleration structures.

- Working in a team of three, planning out the timeline and dividing tasks
- Using C++ to implement the basic functions of a physically-based renderer
- Adding additional features by adding a new light source and implemented scattering in a non-homogeneous medium
- Using Adaptive Sampling algorithm to get rid of the noise in the picture while ensuring rendering time stays low
- Building various 3D models using Blender and modified Collada parsers for rendering scenes with scatterings

CPU Processor Simulator（Logisim）

Summary: a 32-bit, two-cycle processor implemented using Logisim

- Implementing ALU and Regfile that executes RISC-V instructions
- Building a two-cycle pipeline processor which fetch and decode instructions
- Optimizing the processor by considering the abnormal cases like dealing with jumps or stalling the pipelines when necessary
- Designing and testing on test cases