

Geoffrey Ding

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

B.S. IN COMPUTER SCIENCE

Exp. Apr. 2023 | Urbana, IL

College of Engineering

Chancellor's Scholar

Tech. GPA: 3.92 / 4.0

Cum. GPA: 3.81 / 4.0

UNIVERSITY OF ILLINOIS LABORATORY HIGH SCHOOL

Grad. Apr. 2020 | Urbana, IL

Cum. GPA: 3.95 / 4.0

COURSEWORK

UNDERGRADUATE

Data Structures and Algorithms

System Programming

Software Design Studio

(Taken Class & 1x Course Assistant)

Computer Architecture

User Interface Design

Game Development

SKILLS

PROGRAMMING

Over 5000 lines:

C++ • Java • C# • C

Over 1000 lines:

Python • HTML • CSS • Assembly

Familiar:

Android • Unity • Unreal • MySQL

Artificial Intelligence • Multi-Threading

Unit Testing • Genetic Algorithm

Languages:

English • Mandarin • Shanghainese

PROJECTS

POLLOCK PARTICLE SYSTEM ENGINE

July 2017 – Present | C++

- Fully customizable particle system editor with OpenGL. Exported into YAML files. Multi-threaded with synchronous duo render queue
- Mapped out GUI using ImGui to allows users to modify particle system's properties (emission rate, color, etc)
- Created animation and texture handlers to allow users to attach animated textures onto the particles

JUMP HIGHER! w/ GENETIC ALGORITHM AI

Aug. 2020 – Feb. 2021 | Java

- Created a game inspired by Jump king with AI controlled entities trying to get to the top of the map as fast as possible using the genetic algorithm.
- Used ImGui to allow users to create levels on their own, change proprieties of the game, and customize the AI training on their level
- Used YAML exporting to allow easy saving of levels and models. Included functionality such as viewing past models and generations

CUBE SWINGER! SIDESCROLLER APP GAME

Mar 2019 – Present | C#

- Unity based game arcade style game where players are tasked to gain enough velocity via swinging in order to "break" to the next portion of the level.

EXPERIENCE

DREAM COLLEGE US LLC | COMPUTER SCIENCE TUTOR

Apr 2020 - Aug. 2021 | Warren, New Jersey (Online)

- Taught Java intro programming classes to middle school and high school students virtually. Students at the end of the course would be prepared enough for USACO Bronze competitions
- Also taught classes on Data Structures in C++ and game programming in Unity
- Developed and created the curriculum myself. Created challenging classwork and homework problems that help students think about the material taught and test themselves on the content they learned.

CAST N' CATCH | HEAD DEVELOPER

Jan. 2019 – Jan. 2020 | Champaign, IL

- Led development of the app with a small team (4-5 people) of developers, artists, and sound engineers. Led daily scrum and generated innovative ideas.
- Designed and developed original prototype of app within Android Studio
- Designed an algorithm to help determine the catch rate of different types of fish depending on location, time of day, and bait used.
- Designed and developed the UI behind bait selection and overhauled the sonar mechanisms
- Solid experience with several tool such as Git, Android Studio, and Unity