Martin Weiqi Gong 龚炜棋

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Education

University of Southern Californiа, Los Angeles, CA 2023 – Present
B.S. in Physics, B.S. in Computer Science Games GPA: 3.93
Deerfield Academy, Deerfield, MA 2019 – 2023
High School Diploma with High Honors and Excellence in Computer Science GPA: 3.85

Coursework

Linear Algebra, Differential Equations, Calculus, Mechanics, Electromagnetism, Data Structures & Algorithms.

Skills

Code: Python, JavaScript, TypeScript, C++, Go, Arduino, HTML, CSS, Verilog, Java, PHP
Tech/Env: LaTeX, Bash, Git, Makefile, TensorFlow, PyGame, Matplotlib, React, Node.js, Windows, Linux
Software: Adobe Suite, AutoCAD, Mathematica, SolidWorks, KiCAD
Languages: Chinese(Fluent), English(Fluent), Spanish(Basic), Japanese(Basic)

Experience

Lightpaw Interactive Shanghai (Shenzhen) Co. Ltd., Shenzhen, China May – Jul 2024
Student Intern: Game Designer, Programmer

- Worked on a RPG-style mobile game using the Cocos Engine.
- **Localization Lead:** Finalized and managed the English localization of the game, ensuring cultural relevance and linguistic accuracy within context of the game.
- **Quality Assurance:** Tested and assisted in fixing critical client-side and server-side bugs.
- **Game Management Utils Development:** Created and maintained Game Master utilities using React and WebSocket protocols to facilitate real-time game management.
- **Feature Design:** Designed the mechanics and UI/UX of the gem socketing feature, improving player engagement and in-game customization options.

EZfun Interactive Technology Ltd., Shenzhen, China Jun – Aug 2023
Student Intern:

- **Localization:** Created and optimize the translations for the English mobile version of *Dynasty Warriors*
- **Audio:** Optimized in-game audio and fine-tuned game mechanics in Unity for a WeChat minigame.

First Tech Challenge, Deerfield, MA Aug 2018 – Apr 2023
Team Leader; Mechanical Design and Robot Programming

- Visual pattern and object recognition and autonomous robot operation logic in Java using OpenCV and TensorFlow Lite.
- Mechanical design of task specific retrieval/placement mechanisms and wheeled chasis.
- CAD modeling of robot design in SolidWorks with custom and standard parts.

Projects

Website and Web Service – Personal website and API maintenance 2019 – Present

- Build and maintain websites using Go, TS, React, and NGINX. Previously built Maintain blog using Ghost CMS.
- Build custom APIs using Go/Node.js to cache/serve testing applications and learning projects.
- Route and maintain proxied servers for computer games using OpenVPN.

Geiger Counter – Geiger counter based on FPGA. Spring 2023

- Program FPGA to handle analog rising edges of the Geiger tube.

- Concurrent control of different devices (buzzer) with single clock
- Design and optimization of high-voltage circuits

"Sugar" Game – Minimalistic 2D 2-Player Game Spring 2022

- Created in two days as a digital remake of a conceptual tabletop game by a friend.
- Used PyGame and open online assets to create the game for PC.

Analysis of Soft-Tip Mechanical Fingers – Statistical analysis of the effectiveness for each. Summer 2022

- Statistical/mathematical modeling of kinematics of mechanical fingers using python and demonstrated with matplotlib.
- CAD designing of experimentation apparatus with interchangeable mechanical tips. Manufacture apparatus through 3D printing and laser cutting.

Eye Tracking Page Flipper – Page flipping for disabled/performers Summer 2021

- Utilize OpenCV to track and locate relative position of the iris with edge detection and center of mass algorithms
- Physical modeling and design of pressure based page flipping device for physical pages