

# Shim Steven S. Manaloto

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## TECHNOLOGIES AND LANGUAGES

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C++, Python, C, C#, SQL, HTML, CSS, Flask, Javascript, Visual Studio, Git

## PROJECTS

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### Nintendo Entertainment System Emulator (C++) ([github.com/Shim06/Anemoia](https://github.com/Shim06/Anemoia))

- Developed an NES emulator, emulating the MOS Technology 6502 microprocessor (CPU), the Pixel Processing Unit (PPU), and several NES memory management cartridge hardware
- Integrated audio emulation to replicate NES sound processing, including implementing pulse wave, triangle wave, noise, and DMC channels
- Ensured emulation accuracy and compatibility with over 86% of the official NES game catalog

### CHIP-8 Emulator (C++) ([github.com/Shim06/Nibbelium](https://github.com/Shim06/Nibbelium))

- Implemented CHIP-8 memory, registers, and instruction fetching, decoding, and execution
- Achieved 99% accuracy and compatibility in emulation through testing with over 100 game ROMs and 8 test ROMs

### Raycasting Rendering Engine (C++) ([github.com/Shim06/Raycasting-Engine](https://github.com/Shim06/Raycasting-Engine))

- Developed a rendering engine using raycasting techniques, capable of rendering ceilings, floors, walls, and sprites
- Implemented texture loading to map onto ceilings, floors, walls, and sprites

### Face Recognition Attendance System (Python) (<https://github.com/Shim06/FRAS>)

- Developed and implemented a face recognition attendance system to monitor the attendance of students/employees with 85% accuracy
- Utilized SQLite as a database to store student/employee information and attendance history

### Automated Fishing Bot for Terraria (Python) ([github.com/Shim06/Terraria-Fishing-Bot](https://github.com/Shim06/Terraria-Fishing-Bot))

- Launched a fishing bot for the game Terraria, garnering over 1,000 downloads from players
- Implemented automatically fishing in the game through image recognition with 95% accuracy

## COURSES AND CERTIFICATIONS

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Harvardx

2024

CS50x: Introduction to Computer Science

## EDUCATION

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City College of San Fernando - Accounting Information Systems

2024 – Present

The University of the Assumption - Senior High School (STEM)

2022 – 2024

- High Honors - S.Y. 2022-2023