Amr El Mantawi

PA, USA • amr.mantawi@gmail.com • (717) 439-5515
https://www.linkedin.com/in/amrelmantawi/ • https://github.com/AmrMantawi

Computer Engineering student that loves to code and build circuits. I aim to better the world with the use of technology and my innovative ability.

Skills & Interests

Technical: C, C++, C#, Java, Java Script, Python, Assembly, Linux, SQL, Verilog, Shell Scripting, TensorFlow
Soft Skills: Teamwork, Adaptability, Critical thinking, Leadership
Tools: GitHub, Visual Studio, Vivado, SolidWorks, Unreal Engine, Unity, Multisim, MaxPlus II, Microsoft Office
Language: Arabic, English
Interests: Drawing, Baking, Gaming, Coding, Building Circuits

Education

Penn State University — State College, PA
BS, Computer Engineering. 3.75 — Aug 2021 - May 2025
Minor, Physics
Schreyer's Honors Program

Work Experience

Engineering Intern, Penn Dot — May 2023 - July 2023
- Collected and analyzed data for PennDOT's Roadway Management System

Peer Tutor, PSU — Aug 2022 - Dec 2022
- Provided one-on-one tutoring sessions to students in computer engineering, computer science, and physics assisting them with homework assignments, projects, and exam preparation.
- Encouraged critical thinking and problem-solving skills, challenging students to apply course material to real-world situations and develop innovative solutions to complex problems.

Projects

FPS Multiplayer Game | C++, Unreal Engine — Jan 2022 - Present
- Developed a multiplayer game using Unreal Engine and C++, demonstrating a strong understanding of game development principles, data structures, algorithms, and programming concepts.
- Implemented peer-to-peer networking using EOS, enabling players to connect to each other directly and enhancing the game's overall performance and reliability.

AI Powered Retro Gaming Console | Python, Raspberry PI — Aug 2022 - Present
- Designed and built a mobile arcade using a Raspberry Pi, demonstrating a strong understanding of electronics, programming, and hardware design principles.
- Designed and programmed an AI-powered voice recognition system for the mobile arcade, enabling seamless communication between users and the gaming console.
- Implemented an I2S signal to capture sound from the Raspberry Pi, enabling the arcade to produce high-quality audio output and enhancing the user experience.

32-bit CPU, Hardware Project — Jan 2023 - May 2023
- Designed and implemented a custom CPU architecture using Verilog, demonstrating a deep understanding of computer architecture and digital design principles.
- Utilized simulation tools to test and debug the Verilog code, ensuring the CPU's functional correctness and reliability.

Activities & Awards

- Autonomous Vehicle Team, Object Detection Team — 2023-Present
- IEEE, Member — 2021-Present
- ACM, Member — 2021-Present
- Dean's List, Recipient — 2021-Present
- Coding Club, Vice President — 2021-2023