Kevin Ghobrial

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SUMMARY

I am driven by my knowledge, skills, and commitment to leveraging technology for global impact, contributing to groundbreaking projects, and driving innovation in the field."

You can Learn More about me from my Website: https://kevin-ghobrial.github.io

EXPERIENCE

Research

Electric ARTium   May 2024– August 2024, Atlanta, Georgia

- Integrated OpenCV into an animatronic caterpillar for real-time dynamic movement tracking, enabling it to interact responsively with individuals in its environment.
- Programmed a microcontroller to accurately control the caterpillar's servo motors based on angles calculated in Blender, resulting in smooth and precise movement.
- Engineered and designed the animatronic caterpillar using CAD software, enhancing its structural and functional precision.

Internship

Georgia Institute of Technology   December 2023 - January 2023, Atlanta, Georgia

- Created Python program to find the line of best fit when given over 40,000 data points.
- Researched Machine Learning by running tests on car starter engines. Specifically, ran tests with an Arduino microcontroller, and analyzed data with MATLAB. Improved the speed of the starter motor by 25%.
- Implemented Computer Science by using a Python script to automate daily tasks, streamlining research process and improving accuracy.

Coding Instructor

Code Ninja's   June 2021 - July 2023, Marietta, Georgia

- Specialized in Java, JavaScript, CSS, HTML, and Scratch. Taught Game development and Web design.
- Taught students the basics of web development and how to use the terminal through structured lessons.
- Acquired leadership skills by managing a group of students and providing support to answer their questions.

PROJECTS

Galactica on Mbed

Personal Project • https://kevin-ghobrial.github.io/project4.html • August 2022 - May 2023

- Developed complex features, including random enemy spawning, multiple missile shooting types, and a dynamic ending animation to enhance gameplay.
- Created an intuitive pause screen and various difficulty modes, ensuring a customizable and engaging user experience.
- Employed efficient coding practices to achieve seamless gameplay while incorporating detailed animations and engaging visual effects for an immersive experience.

AI Volume HandTracker

Personal Project • https://kevin-ghobrial.github.io/ai_handtracker_project.html • November 2023 - January 2024

- Implemented hand detection and landmark tracking using OpenCV, AppleScript, and the Mediapipe library, enabling real-time recognition of hand movements.
- Acquired knowledge in computer vision algorithms, gesture recognition, and system automation, contributing to personal skill development and technical expertise.

Renewable Energy Bike

Georgia Tech Renewable Energy Club • August 2023 – December 2023

- Systems Software Engineer responsible for researching Microcontrollers, USB Charge Controllers, and Visual display units.
- Designed and implemented an algorithm that uses a system's non-linear characteristics to improve power generation by ~50% and reduce required user input by ~10%.

EDUCATION

Computer Engineering

Georgia Institute of Technology • Atlanta, Georgia • 2026

- Zell Miller Scholarship

SKILLS

Front End: JavaScript, CSS, HTML
Back End: Java, Python, C++, C
Software: Linux, SolidWorks, Fusion 360, Excell