Gavin Abrigo

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Education

University of California Merced Merced, CA

Bachelor of Science in Computer Science & Engineering *May 2026*

Relevant Coursework: Data Structures & Algorithms, Intro to Machine Learning, Database Systems, Computer Vision,

Technical skills

Languages — TypeScript, JavaScript, GoLang, Java, Python, C/C++, JavaScript, HTML/CSS, LaTeX, MIPS Assembly, SQL, PostgreSQL, MATLAB

Technologies — React, FastAPI, Git, Node.js, Next.js, Vite, StreamLit, Nvidia NIM, Tesseract, OpenCV, Docker, PyTorch, Pandas, Excel

Certificates –

- **Career Skills Certificate Electronics II**: understand, construct, and test sequential logic circuits.
- **Certificate of Completion - FlexFactor** - completed project-based learning program

Experience

Software Engineer Intern January 2025 - March 2025

Oculus (NFT Automation Software Company) *Remote*

- Assisted in the early development of Bash tools and TypeScript modules for command-line interfaces while collaborating closely with developers to define architecture and feature sets.
- Tested and documented new CLI commands and workflows, ensuring consistent behavior across Windows, macOS, and Linux environments

Teaching Assistant June 2022 - June 2023

TechKnowHow *San Jose, CA*

- Developing kids' understanding of coding and design with Scratch, Minecraft, and LEGOs.
- Maintaining an orderly classroom and leading classroom curriculum
- Collaborating with other teachers in creating a safe and fun classroom environment

Projects

OCR-Tool | *Python, Tesseract OCR, OpenCV, PDF2Image*

Built a Python-based pipeline to automate text extraction and document digitization from PDFs.

- Leveraged Python libraries for seamless page splitting, rotation correction, and image preprocessing.
- Enhanced bulk OCR efficiency with customizable settings and progress-tracked exports.

Fleet-AI | NVIDIA AI Agent Hackathon | *Nvidia NEMO, Python, StreamLit*

Designed a smart fleet management dashboard powered by Python for real-time data and AI interaction.

- Used Python, StreamLit, and Nvidia NEMO to enable live data visualization from a generated .csv file and natural language interface.
- Built a rule-based agent system to optimize vehicle oversight, routing, and maintenance tracking.

ChickGuardian (Engineering Development and Design) | *Arduino, PCB Design*

Implementation of an Arduino-controlled motorized automatic door system.

- Created to facilitate the seamless opening and closing of a chicken coop door at predetermined times
- Empower users with the freedom to care for their chickens without the inconvenience of early morning wake-ups.