Ethan Nguyen

EthanNguyen112@gmail.com | +1(714) 913-5777 | linkedin/ethan-nguyen112 | github/EthanNguyen112

Experience

Caretaker Provider, In-Home Support Services – Fountain Valley, CA — January 2022 - Present

- Providing physical and technical support to elderly users, resulting in improved digital literacy and accessibility.
- Setting up collaboration tools (e.g., Viber, Google Chat), and resolving hardware issues across multiple devices.

SaaS Platform for Museum Management, *MuseumSoft* - Remote — July 2025 – December 2025

- Built REST APIs (NestJS, Prisma, PostgresQL, Swagger) for ticketing, CRM, memberships, and event scheduling.
- Developed frontend pages and components using Next.js, Shadcn, and Tailwind.
- Implemented JWT authentication with refresh token rotation and role-based access control.
- Created a signed-URL upload pipeline for file uploads to Google Cloud Storage

Software Engineer Intern, L3Harris Power Paragon Inc - Anaheim, CA — June 2019 – January 2021

- Generated tracking reports from 50+ tickets, removing manual reporting and improving project status visibility.
- Validated hardware/software for nuclear control systems, increasing data accuracy and system reliability.
- Built a GUI-based VBScript tool to standardize format documentation, reducing manual effort by ∼30%.
- Structured and maintained documentation to align system architecture and engineering updates.

Skills

Languages: Python, C++, C, Verilog, Bash, VBScript, TypeScript

Tools & Platforms: Git, Atlassian Tools, Vivado, Visio, Arduino IDE, Node, React, Next, Tailwind, and GCP

Projects

An Embedded Weather Quest | C

- Built an IoT weather client on TM4C123 using CC3100 WiFi to fetch real-time data via REST API.
- Implemented HTTP requests and parsed JSON responses to display temperature, humidity, and conditions.
- Developed UART-driven multi-mode query interface (city, ID, coordinates, ZIP) at 115200 baud.
- Designed dynamic weather animations on ST7735 LCD using SPI with frame-based redraw logic.

Bluetooth Remote Controlled Car | C

- Built HC-05 Bluetooth module via UART for wireless serial motor control.
- Implemented AT command configuration and secure pairing for reliable device communication.
- Designed UART command parser to control bidirectional motor movement and real-time speed adjustments.
- Developed PWM-based differential drive system for directional steering and variable speed control.

FPGA Oscilloscope | Verilog

- Built dual-channel oscilloscope using 12-bit 1 MSPS XADC with real-time waveform rendering.
- Designed analog front end scaling 0–40V inputs to 0–1V ADC range with attenuation and protection circuitry.
- Implemented modules for ADC control, RAM buffering, rising-edge triggering, and min/max signal capture.
- Developed custom VGA controller with adjustable voltage/div, time/div, and trigger threshold controls.

Education

California State University, Long Beach - Bachelor of Science (BS) in Computer Engineering

Relevant Coursework: Embedded Systems, Operating Systems, SOC Design, Digital Signal Process Design, Digital Design Tech Verification, Computer Logic Design, Microprocessors+Controllers, computer architecture

Extracurricular: Vietnamese Student Association, phone repairs, and computer debugging for friends and family