Noah Nguyen — 5721 Aspen Grove Lane, Elk Grove, CA — 916.230.6850 — nien@ucdavis.edu —

Objective

Interest in embedded system design, science communications, professional writing, and government administration

Education

University of California Davis.....Davis, CA

- ➔ Master of Science in Electrical and Computer Engineering M.S. Graduated: December 2024
- ➔ Electrical Engineering Major with a focus in Embedded Systems, Wearable Technology
- ➔ Graduate Studies GPA: 4.0

Experience

UCD Research: Underwater Ecosystem Embedded System for Conservation

- ➔ Coordinated efforts between UCD Bodega Marine Laboratory, UCD Jeong Research Group, and UCD Coastal and Marine Sciences staff to prototype an environmental sensor platform for the endagnered white abalone
  - ◆ Facilitated correspondence and regular status updates, directed efforts and future plans for the project
  - ◆ Led recruiting efforts for new members and created presentations for SPIE conference and guest lectures
- ➔ Fabricated the device and developed testing methods for key performance parameters
  - ◆ Soldered surface mounted devices, designed printed circuit board
  - ◆ Evaluated the effectiveness of chosen waterproofing and sensor modules for the animal's habitat

UCD Research: Extreme Environment Nonvolatile Memory (NVM)

- ➔ Simulated charge trapping devices under ECE Professor Saif Islam
  - ◆ Tested HfOx and other High-K layers in Silvaco TCAD
  - ◆ Experimented with layer sizes to find optimal charge retention at various temperatures
- ➔ Compiled research on current extreme environment charge trapping devices
  - ◆ Parsed IEEE, UCD Library, and Google Scholar for recent NVM efforts
  - ◆ In the process of writing and publishing a paper on findings

UCD Research: Wearable Electronics

- ➔ Working with ECE Professor Jeong on a wearable jaundice sensor and magnetic compass for abalone
  - ◆ Developing firmware solutions for generating signal packets with BLE
  - ◆ Interfaced with UCD Medical teams to produce working prototype
  - ◆ Developing and fabricating wearable e-tattoos and flexible electronics

UCD TES Applications Programmer:

- ➔ **Built over 30** sites with MariaDB and Nginx, Django, Various Wordpress Sites (AWS, GCC, VMware)
- ➔ Manage mass Association wide migration to Drupal SiteFarm
- ➔ General Manager over 6 IT programmers
  - ◆ Coordinated projects, meetings, communication, documentation, and software VRAs

University Projects:

- ➔ Built multiple digital state based systems in Intel's Quartus' Verilog device design software
- ➔ Actively led group assignments for:
  - ◆ The following courses—Engineering Communications, Engineering Problem Solving, Digital Systems II, Graduate Error Correcting Codes
  - ◆ Senior design IOT object detection camera and Android application for pool safety monitoring
- ➔ Worked with Engineers Without Borders, Kenya on defining solar power requirements for a well

Startup:

- ➔ **Previously** the Hardware Lead for a team working on a Davis based IOT pool monitoring startup (Bluetooth, Node JS)
  - ◆ Registered as a UCD PLASMA Student Startup, prototyping for the largest pool maintenance company in Yolo County
  - ◆ Led weekly meetings and managed hardware projects, outlining next steps and technical documentation

Skills

COURSEWORK:

- ➔ **Focus in control systems, Internet Of Things, and Embedded Systems**
- ➔ Spring Quarter Courses: Solar Panel Electronics, Introductory Digital CMOS Design

TECHNICAL:

- ➔ General Electrical Engineering:
  - ◆ Intermediate in MATLAB, API integration for IOT devices, Nordic BLE Chip Firmware experience, C Programming experience, ANSYS Lumerical, Quartus, LTSpice basics, Verilog intermediate, Virtuoso basics
- ➔ Information Technology.:
  - ◆ Python scripting, server management, Ubuntu, familiarity, Bash scripting, Docker proficiency, Web Design proficiency (Wordpress, Bootstrap, Nginx, TLS Management), Google Cloud Compute, AWS (IOT, ec2, VPC, Rekognition, s3)

OTHER:

- ➔ Strong Project Management skills, Leadership, IT Support, Laser Cut Machining, Construction Framing
- ➔ Microcontroller:
  - ◆ Communications through I2C and UART, HM bluetooth modules, BLE
- ➔ MISC Applications:
  - ◆ AutoCAD, MS Office Applications, Davinci Resolve

Awards

- ✦Arthur & Julia Suran Endowment Scholarship for excellence in Electrical Engineering in 2022
- ✦Kind Family Scholarship for Prospective Students in STEM in 2022
- ✦ASUCD Mark & Linda Champagne Award for Service to ASUCD in 2021
- ✦Grivetti Aggie International Study Abroad Award in 2022

Volunteer and Travel

Summer 2023

United Kingdom (European Hyperloop Week): Ireland, Scotland, Northern Ireland, England

- ➔ Deciphered diagram and aided with presentation for the UC Davis Oneloop team in the European Hyperloop Week transit pod engineering event
- ➔ Visited historical and cultural sites such as the Dublin G.P.O., Belfast City Hall, Palace of Westminster, and the University of Edinburgh

Summer 2022

Iceland Study Abroad, Engineering UC Davis Program

- ➔ Studied thermodynamics 40 minutes walking distance from Hafnarfjörður
- ➔ Toured to Iceland's production plants including:
  - ◆ Fjarðaál Aluminum smelting
  - ◆ Nesjavellir 120 Megawatt Geothermal Power Plant

2018-2019

Maranatha Volunteers International

- ➔ Entre Ríos, Bolivia (2018)
  - ◆ Constructed two concrete school buildings, installed electrical conduits and lighting, provided outreach and provided sanitation aid in
- ➔ Kenya (2019)
  - ◆ Provided outreach and community economic support by setting up local store at children's school at Athiru
  - ◆ Worked with construction teams and students to construct two schoolhouses in the Kiutine Adventist School seven miles north of Nairobi

2016-Present

Elk Grove, California

- ➔ Volunteer work for Elk Grove Food Bank
  - ◆ Provided community outreach by providing California State food packages to families in need
  - ◆ Conducted general warehouse maintenance under the supervision of volunteer coordinator Darcie Owens
- ➔ Youth:
  - ◆ Elk Grove Youth Council, Sacramento Central Adventist Kitchen, Neighborhood Thrift

2017

Organization of Chinese Americans, Sacramento

- ➔ Represented my high school in meeting Asian Americans from across the United States in 2017
- ➔ Publicly spoke and networked with those pushing Asian American educational and political interests