ANH (CLARA) TRAN

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EDUCATION

Bachelor of Science, Electrical and Electronics Engineering Aug 2023 - Present
California State University, Chico, GPA 4.0/4.0 Chico, CA

- **Awards:** International Student Academic & Performance Scholarship (2023), Dean's List (2023-2024), AAS 245 Chambliss Student Poster Competition Finalist (2025), Taiwan Experience Education Program Scholarship (2025)

High school diploma, Physics Aug 2020 - May 2023
Ho Chi Minh High School for the Gifted, (GPA 9.5/10.0) Ho Chi Minh City, Vietnam

- **Awards:** Salutatorian (2023), Scholarship for Gifted Student (2022-2023)

EXPERIENCES

Sensor Team Lead Aug 2024 - Present
Chico Rocketry and Aerospace Club Chico, CA

- Led the development of an Arduino-based embedded system capable of collecting real-time flight data of an amateur rocket for simulation purposes. Data can be retrieved after launch.
- Worked on schematic capture, board layout, assembly, and debugging of a compact PCB to improve space efficiency and reduce wiring errors.
- Collaborated with other club members to ensure electronic system and mechanical design compatibility.

Undergraduate Research Assistant Jun 2024 - Present
Department of Physics, California State University, Chico Chico, CA

- Analyzed emission datasets of multiple gases to spatially and quantitatively estimate hydrogen in a molecular cloud.
- Utilized Astropy and SciPy to develop a pixel rebinning algorithm in Python with a non-integer factor to convolve and align several images with different angular resolutions for comparative analysis.
- Applied curve-fitting and performed statistical analysis to derive insights into the dominant trends of the data.
- Presented at the 245th national meeting of the American Astronomical Society, National Harbor, MD.

Chemistry Tutor Apr 2024 - Present
Student Learning Center, California State University, Chico Chico, CA

- Supported students taking introductory chemistry in their learning through individual and group tutoring sessions.
- Utilized visual aids and interactive tools to simplify complex topics and foster independent learning among students.

PROJECTS

ARM Single Cycle Processor | Course Project Dec 2024

- Designed and implemented the datapath of an ARM Single Cycle Processor in SystemVerilog, enabling the execution of basic data, memory, and branch instructions in a single clock cycle.
- Developed a control unit to manage the datapath and coordinate the execution of each supported instruction.
- Developed testbenches to validate each submodule and a test program to validate the performance of the processor. Simulated and tested the design using ModelSim to verify correct output results.

Polybius Encryptor and Decryptor | Personal Project May 2024

- Created a Python program to map the Latin alphabet to the corresponding coordinates in a 3x3x3 cube based on the Polybius square encryption.
- Developed an encryption method by generating the corresponding 3D coordinate matrix of the letters and transposing this matrix to encrypt the text. The message can be traced back by a decryption function that reverses this process.

SKILLS

Technical: Data analysis & visualization (Jupyter Notebook), Circuit simulation (LTspice), PCB design (EAGLE), HDL design & FPGA prototyping (Quartus Prime & ModelSim), Version control (Git)
Laboratory: Using function generators, oscilloscopes, digital multimeters, Soldering, Breadboarding
Programming languages: Python, C/C++, MATLAB, SystemVerilog, ARM Assembly
Relevant coursework: Linear Circuits, Computer Architecture, Embedded Systems, Multivariable Calculus, Differential Equations, Statistics, Physics II (Electromagnetism), General Chemistry