

Chenchu Yakasiri Saravanan

US Permanent Resident | ynchenchuh@icloud.com | (310)-357-4896 | GitHub: <https://github.com/ChenchuH>

EDUCATION

California State University Long Beach

B.S. Physics

Long Beach, California

Expected Graduation, May 2027

Concentrations: Condensed Matter Physics

Coursework: Computational Physics in Python, Object-Oriented Programming, Numerical Methods, MATLAB for Engineering Applications

PROJECTS

WeatherCLI

Mar 2026 – present

- Actively developing and maintaining a production-ready CLI tool for location-based weather queries, distributed via pipx on Linux systems as well as WSL for windows users
- Integrates Open-Meteo for forecasts and Geopy for global geocoding, with robust error handling and fallback mechanisms for API failures, includes automatic github actions CI testing to ensure minimal downtime of service
- Implements supports for exporting forecast data to CSV/JSON for downstream visualization; fully open-source and self-contained

Raman Spectral Data Visualization Tool

May 2025 – May 2025

- Developed a tool in jupyter notebooks to plot and study shifts in Platinum ditelluride Raman spectral peaks, allowing for visualization of topological trends and export of data to be used in research publications.
- Utilized the Plotly library to create interactive graphs, providing users with dynamic control surpassing that of OriginLab, the industry standard for data plotting.
- Designed to be scaled for any form of spectra data by providing users full control over parameters and plotting methods through variable inputs.

EXPERIENCE

CSULB Nanoelectronics Group

Undergraduate Researcher

Long Beach, California

Jun 2024 – Present

- Assisting in the development and understanding of electronic devices made of van der Waals heterostructures via fabrication of primarily Platinum ditelluride. Crystals then to be analyzed via Atomic Force Microscopy and Raman spectroscopy to find correlation of crystal topological features between AFM and Raman Spectroscopy data.
- Took charge with authoring CSULB's updated Raman Spectroscopy SOP as principle operator.

CSULB Shark-Sat 1 project

ADCS Engineer

Long Beach, California

Aug 2023 – Nov 2024

- Took charge in initial design draft of the Shark-Sat 1's ADCS systems, working with vendors and industry veterans on orbital dynamics and satellite tracking.
- worked with the greater ADCS team with knowledge buildup and initial design of the SharkSat-1's detumble simulation to aid with Avionics team software design.
- Eventually moved on from this role taking knowledge and experiences gained into a pivot towards computational physics.

ACTIVITIES AND LEADERSHIP

Western Museum of Flight

Aircraft Model restoration technician and Museum Docent

Torrance, California

Feb 2024 – Jul 2025

CSULB Astronomy Club

Treasurer

Long Beach, California

Aug 2024 – Sept 2025

SKILLS

Programming: Python, Bash, HTML/CSS, MATLAB,

Tools: PyCharm, AWS, Jupyter Notebooks, Windows Subsystem for Linux, Solidworks, WiTec suite, AGI Toolkit, Raman Spectroscopy, Atomic Force Microscopy,