

Bryan Nakasone

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EDUCATION

University of Hawai'i at Manoa

Honolulu, HI

B.S. Computer Science, Data Science Track — GPA: 3.5

Expected Graduation: May 2027

Relevant Coursework: Machine Learning, Data Structures and Algorithms, Probability and Statistics, Linear Algebra, Software Engineering.

In Progress (complete before Summer 2027): Computer Vision; 3D Mapping and Spatial Analysis; Big Data Analytics.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, C#, SQL, MATLAB, LISP

ML & Data: PyTorch, Hugging Face, scikit-learn, XGBoost, Optuna, pandas, Jupyter Notebook

Geospatial & 3D: Unity, GeoJSON, shapefiles, raster/vector layer processing, projection mapping, Google Earth Engine

Infrastructure: Linux, Docker Compose, Caddy (reverse proxy, TLS), Tailscale (WireGuard), DNS administration, Git/Forgejo/GitHub, Bash/CLI, PostgreSQL

Hardware: Through-hole soldering, ZMK firmware configuration, hardware debugging, CAD (3D modeling), large-format FDM 3D printing

EXPERIENCE

Laboratory for Advanced Visualization and Applications, UH Manoa

Honolulu, HI

NSF Research Experiences for Undergraduates (REU) — Laboratory for Advanced Visualization and Applications

August 2025 – Present

- Contribute to HAVEN (Hawai'i Advanced Visualization Energy Nexus), an interactive system built with the Hawai'i State Energy Office that projects multi-layered GIS datasets onto physical 3D-printed models of the Hawaiian islands, making energy infrastructure and land-use planning data accessible to policymakers and communities; recently awarded \$1.8M in federal funding for statewide expansion.
- Redesigned the home screen interface in Unity and extended system coverage to include the island of Kaua'i.
- Imported and processed satellite imagery of the Hawaiian islands using the Google Earth Engine API and Google Cloud Platform.
- Built GeoHaven, a full-stack web app converting GeoJSON and zipped shapefiles into projection-optimized raster layers, removing a manual preprocessing step from the team's workflow.
- Operate and maintain the lab's Modix Big-120X large-format 3D printer, producing the terrain models and handling diagnostics, failed prints, and part replacement.

Frank DeLima's Student Enrichment Program

Honolulu, HI

Personal Assistant

June 2022 – January 2025

- Supported 100+ live performances at schools and public venues, handling audio setup, stage coordination, and costume transitions under tight turnarounds.
- Adapted to unfamiliar venues and technical constraints, troubleshooting equipment issues on site before showtime.

PROJECTS

Self-Hosted Server Infrastructure

Personal Project

Docker Compose, Caddy, Tailscale, Linux

2024 – Present

- Designed, deployed, and maintain a self-hosted Linux server running a dozen containerized services, including Forgejo (version control), Vaultwarden (credentials), Technitium (DNS), Radicale (CalDAV), Navidrome, and SearXNG.
- Orchestrate all services with Docker Compose and front them with Caddy for TLS termination, automatic certificate renewal, and reverse proxying to internal hosts.
- Restricted all access to a private Tailscale (WireGuard) network rather than the public internet, applying least-privilege access control across users and devices.
- Administer internal DNS and handle upgrades, backups, and incident recovery end to end.

Sentiment Drift & Bot Detection Pipeline

ICS 435

Python, Hugging Face, XGBoost, Optuna

- Engineered an end-to-end NLP pipeline to collect data via the Bluesky API, filter adversarial bot activity, and visualize public sentiment drift over time.
- Developed an anomaly detection filter using TF-IDF word and character n-gram features with a tuned XGBoost classifier, achieving 96.25% recall on automated content.
- Fine-tuned a RoBERTa transformer for multi-class sequence classification using Hugging Face and Optuna Bayesian optimization, then mapped predictions to a rolling-average time series correlating opinion shifts with real-world events.

Peer-to-Peer Campus Marketplace

ICS 314

Next.js, React, PostgreSQL

- Built a full-stack e-commerce web application for peer-to-peer trading within the UH Manoa community, deployed on Vercel.
- Implemented secure user authentication and designed the relational database schema in PostgreSQL.
- Collaborated in a team using Agile sprint planning, code review, and version control.

Custom Split Mechanical Keyboards

Personal Project

- Design and hand-assemble split ergonomic keyboards (Corne 36-key, Geist Totem), including through-hole soldering, component selection, CAD modeling of physical parts, and hardware debugging of continuity and short faults.
- Write and maintain custom ZMK firmware keymaps with layered bindings, building and flashing to the boards.