

Brody England

(520) 507-9660 | brodyengland3@gmail.com | brodyengland.com | linkedin.com/in/brodyengland | github.com/bme2003

EDUCATION

Northern Arizona University

Bachelor of Science: Computer Science
GPA: 3.54

Flagstaff, AZ

Aug. 2022 - Anticipated Graduation: May 2026

EXPERIENCE

Northern Arizona University

Research Software Engineer Intern ([CSIL](#) and [FEWSION Project](#))

Hybrid, Flagstaff, AZ

Jan. 2025 - Present

- Built and maintained production analytics services for FEWSION, a large-scale global supply-chain and infrastructure modeling platform.
- Developed distributed Python systems for large-scale graph analytics and optimization using Neo4j and parallel computation.
- Optimized a distributed commodity-flow solver through algorithmic refactoring, profiling, and parallelization, reducing end-to-end runtime by 53% on large network workloads.
- Co-authored a peer-reviewed computational hydrology manuscript, translating production software systems into validated research results.

Air Force Research Lab (AFRL)

Machine Learning and Robotics Research Intern

Rome, NY

Jun. 2025 - Aug. 2025

- Developed and deployed a neuromorphic neural network for onboard robotic learning, reducing collisions by 75% while improving autonomous path-planning accuracy.
- Validated performance across simulation and physical hardware trials; automated ROS telemetry collection and KPI analysis pipelines.
- Co-author of the SPIE Defense + Security 2025 submission “Neuromorphic Systems to Enable AI for Next-Gen Robotic Platforms” (Tracking #DS26-DS301-8).

Northern Arizona University Information Technology Services

Senior Student IT Support Technician
Student IT Support Technician

Flagstaff, AZ

Feb. 2024 - Present

Nov. 2022 - Feb. 2024

- Lead a 30-member technical support team overseeing escalations for Canvas, Google Workspace, and LOUIE/PeopleSoft serving thousands of users.
- Trained and mentored 10 technicians, improving onboarding efficiency and reducing repeat incident rates.
- Resolved advanced networking, authentication, VPN, and directory-service issues, including faculty and enterprise escalations.

PROJECTS

Explainable Autonomy Kit | *FastAPI, NumPy, JavaScript/Canvas* | [GitHub](#)

- Developed a robotics planning system that visualizes route trade-offs across time, risk, energy, and time.
- Built an interactive frontend enabling real-time debugging and interpretability for planning algorithms.
- Implemented custom visual layers and REST endpoints to stream planner state for live analysis.

ConTiNGENT (Convert TLA+ Into NVMe Generative Test) | *TLA+, Rust, TLC, Graphviz* | [Website](#)

- Engineered a pipeline that translates TLA+ NVMe specifications into executable NVMe SSD verification tests.
- Built Rust tooling that parses TLC traces and runs nondeterministic NVMe command sequences via nvme-cli.
- Reduced SSD verification time by ~60% by replacing manual NVMe workflows with automated test generation.

Self-Hosted Server | *HTML/CSS, Nginx, Docker, Debian* | brodyengland.com

- Built and maintain a self-hosted platform providing authenticated user access to VS Code Server, SSH/web terminal, and VPN services.
- Deployed services through containerized infrastructure behind Nginx with automated TLS and backups.
- Consolidated multiple applications under one domain with stable uptime and secure access controls.

TECHNICAL SKILLS

Languages: Python, C/C++, Rust, JavaScript/TypeScript, SQL, Bash

Systems & Backend: Linux, Docker, Nginx, Git, SLURM, AWS, REST APIs, Visual Studio Code, Windows

Frameworks: FastAPI, Flask, React, Tailwind CSS

Data / ML: NumPy, PyTorch, TensorFlow, OpenCV