# Drew Council

**Software Engineer** specializing in embedded systems and infrastructure. Skilled in agile development, DevOps management, network infrastructure, Docker containerization, and AWS integration. Proven leadership in team coordination and technical education. Seeking Full-Stack Software Engineering positions.


- drew@drewcouncil.com
- LinkedIn
- 770-833-1759
- New York City, NY


## Work Experience

### Software Engineer

**Dirac, Inc.**, New York City — *Nov 2024–Present*

- Developed software on an agile team for automated work instructions.
- Led database migration to DynamoDB that entailed cross-sectional refactoring on Go codebase.
- Implemented complex path planning computational geometry algorithms in Python and C++.
- Managed dev tooling and testing infrastrucutre with NixOS and a locally hosted GitHub action runner.

### Software Engineer

**BotBuilt Robotics**, Durham — *Jan 2022–May 2024*

- Developed software on an agile team for robotic house construction.
- Led DevOps: managed CI/CD pipelines, developer tools, and embedded deployment.
- Designed embedded hardware for a ROS2 network (actuator & sensor services).
- Established automated Docker container testing on pull requests.
- Integrated AWS for automated image builds with custom logging and error reporting.

### Software Subteam Lead

**Duke University Robotics Club**, Durham — *Jun 2020–Jun 2022*

- Coordinated a 25-member agile team using ROS, Docker, and Git on a shared Python codebase.
- Implemented PID control, sensor fusion, computer vision, and SMACH to enhance autonomy.
- Placed 1st in Propulsion System & Technical Report (2021, 2022); 3rd in Sensor Optimization (2021).

## Projects

**NixOS Developer Configuration** — *Jan 2025–Present*

- Created extensible system configuration for developer workloads based on NixOS

**FPGA Typeracer-style Arcade Game** — *Sep 2022–Dec 2022*

- Implemented a MIPS-like pipelined processor in Verilog for serial input & VGA output.
- Built a two-player typing arcade game with custom display and keyboard drivers on FPGA.

**xv6 UNIX Additions** — *Sep 2022–Dec 2022*

- Added kernel threads with system calls and context switching to xv6 (in C).
- Introduced copy-on-write fork to optimize memory usage.
- Utilized GDB and Valgrind for debugging and testing OS features.

## Skills

Go · Python · C++ · C · Linux · Nix/NixOS · Docker · Git · Bash · GDB · Debian/Ubuntu · RHEL · AWS · Arduino · Raspberry Pi · Yocto Linux · ROS2 · Verilog · PlatformIO

## Education

**Duke University** BS in Electrical and Computer Engineering and Computer Science (GPA 3.8) — *May 2024*