

# Nathaniel Navarro

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## SUMMARY

Disciplined, fast-learning developer with a demonstrated ability to delve into large codebases and execute on features. Full cycle development experience with Xilinx FPGAs, testbench and execution pipelines, and AXI protocols, with strong organizational, communication, and collaborative skills honed through military experience.

## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY  
Bachelor of Science, Computer Science  
Minor in Electrical and Computer Engineering  
GPA: 4.13; Dean's List

**Expected May 2024**

**Relevant Courses:** Computer Architecture; Systems Programming; Embedded Systems; Microcontrollers; Functional Programming; Data Structures and OOP; Digital Logic; Algorithms; Natural Language Processing; Machine Learning

## EXPERIENCE

**Capra Research Group**, Cornell University, *Research Assistant*

**May 2022 – Present**

- Delivered a corrected Verilog AXI protocol implementation, a revamped Linux to FPGA execution pipeline, and planned and developed a from-scratch Cocotb testbench allowing for CI testing of AXI protocol.
- Collaborated with external researchers to isolate 14 protocol bugs in previous AXI implementation through waveform analysis and source-code inspection.
- Integrated corrected FPGA execution system with existing toolchain-driver to allow for easy execution of programs on physical hardware.

**Netflix**, Los Gatos, CA, *Software Engineer Intern*

**May 2023 – Aug 2023**

- Engineered concise, elegant, web-orchestration-infrastructure for the deployment of new webpages leading to 500k monthly increase in users with phone numbers on file.
- Spearheaded a cross functional effort to spec and implement integration of encryption services to secure sensitive user data, mitigating risk of accidental leaks for 230 million users.
- Engineered infrastructure, collection, and monitoring of A/B tests to quantify effects of feature deployments.

**Autonomous Underwater Vehicle**, Cornell University, *Software Developer*

**Sep 2021 – Present**

- Fully integrated and debugged software, hardware, and mechanical components of our autonomous vehicle under 3 month deadline to facilitate success at Robosub 2022.
- Achieved a podium finish at Robosub 2022, placing 6th out of 39 teams.
- Implemented CV algorithms such as Hough transformations, SIFT detection, and Hu moments using OpenCV.

**Israel Defense Forces**, Israel, *Senior Drill Instructor; Staff Sergeant*

**Dec 2018 – Aug 2021**

- Commanded platoons of 40 recruits and instructed them in the skills of a combat Air Defense Operator.
- Trained and supervised junior Drill Instructors in the correct handling and instruction of recruit squads.
- Collaborated with individuals ranging from private to Lt. Colonel to ensure an organized, efficient, complete training experience at the IDF's Air Defense School for 400 soldiers quarterly.
- Received Award of Excellence (2020) for outstanding performance in the IDF Interceptor Training Course.

## SKILLS

**Technical:** Verilog, Python, Java, Spring Boot, OCaml, C, C++, Rust, FPGAs, Linux, Git, Docker, OpenCV, PyTorch,  
**Languages:** English (fluent), Hebrew (fluent), Arabic (intermediate)