Boris Nezlobin

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Education

Applied Mathematics; Industrial Engineering & Operations Research — Aug 2026 - Expected May 2029
University of California, Berkeley (B.A., B.S.) — Berkeley, CA

Dual Enrollment (Community College) — Dec 2024 - Aug 2026
Foothill College | GPA: 4.00 (Dean's List) — Los Altos, CA

Relevant coursework: Abstract Algebra, Discrete Math, Data Science, Linear Algebra, Advanced Algorithms (CS1C).

Clubs: Blockchain at Berkeley (2026-); Paly AI Club (2022-2026); Paly Blockchain Club (2023-2024).

Experience

Vals AI — Starting Nov 2026
Platform Engineer Intern

Lockheed Martin — May 2025 - Sep 2025
Software Engineering Intern — Palo Alto, CA

- Built a memory-mapped CSV reader in Python that outperforms Pandas on single-row lookups by 980x, enabling large-scale solar dataset processing.
- Engineered & benchmarked an empirical polynomial model of solar differential rotation 600x faster than SunPy (industry solar library), outperforming physics-based approach on speed & accuracy. Twitter thread.
- Wrote a file-lock scheduler that coordinated work across thousands of cores on 7–8 lab servers.

Heron Robotics & Kuriosity Robotics (FIRST Tech Challenge) — Sep 2022 - May 2026
Team Captain, Software Lead — Palo Alto, CA

- Designed, implemented, and tested pub/sub code architecture used in World Championship semifinals; one of the first successful multithreaded codebases in FIRST robotics.
- Developed autonomous routines using camera vision and Model Predictive Control; worldwide Top-10 average.

The Journal For Youth Voice — May 2024 - Present
Web Manager & Lead Editorial Editor

- Built and run thejyv.com's publishing platform on Next.js and Cloudflare Workers for about 70 editors, making publishing 3x+ faster for non-technical staff.
- Chosen as Lead Editorial Editor from about 50 founding members; edited 22 articles and run the twice-monthly editing cycle.

Self-Employed — Nov 2025 - Present
Freelance Web Development & Brand Design

- Moved Palo Alto Stanford Aquatics off WordPress to a custom Next.js site and CMS, cutting hosting from about $1,200 to $10 a year and making it far easier for staff to update.
- Designed and built brands, sites, and admin dashboards for Palo Alto Stanford Aquatics, G Studio, and Catalyst for Systems Change.

Projects

Standard Response 6 prizes, a Cal Hacks record | *TypeScript*, *Python*, *voice agents* — **Live** | **GitHub**

- Built *Standard Response*, which calls every home in a wildfire zone with AI voice agents and dispatches rides to people who can't leave; in a replay of the 2025 Eaton Fire, 641 of 662 households got out in time, against 39 through 911.

Amelia — voiceprint conversation memory 1st place, MongoDB Build Fest | *MongoDB*, *Python*, *audio ML* — **GitHub**

- Built *Amelia*: used voiceprint technology to understand real-world conversations and provide actionable reminders about promises to people you've talked to. First-place grand prize ($10,000) at MongoDB Build Fest.

HeronScout | *Java*, *TypeScript* — **Live**

- Built *HeronScout*, an FTC scouting app used by about 50 teams on 6 continents to record 2,000+ matches (over 10,000 minutes of play).

Skills

- **Languages**: Python, Java, C, TypeScript/JavaScript, C#, SQL
- **Tools**: Git, Linux, Docker, MongoDB & Supabase, PostgreSQL, Google Analytics & Firebase, Figma, OpenCV, NumPy
- **Disciplines**: Robotics, Systems, Agents, Full-stack, Design, Photography