

# David Benjamin

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## EDUCATION

### Johns Hopkins University

Baltimore, MD

*B.S. in Computer Science | Minor in Entrepreneurship & Management | GPA: 3.92*

*Expected May 2027*

- Relevant Coursework: Artificial Intelligence, Computing in NumPy, Programming in C/C++ on Linux, Software System Design, Data Structures, Algorithms, Full Stack Development, Computing in Java, Professional Writing and Communication
- Clubs & Activities: Pava Accelerator, Software Engineering Club, Phi Gamma Delta Fraternity, Golf, Lacrosse, Lifting, Skiing

## TECHNICAL SKILLS

**Programming Languages:** Python, JavaScript, TypeScript, Java, C, C++, SQL, Bash

**Frameworks & Libraries:** React, Node.js, Pandas, HTML, CSS, Pandas, NumPy, Next.js

**Tools & Platforms:** Linux/Unix, AWS, Docker, Git, GitHub, Windows, Microsoft Office

**Methodologies:** Agile (Scrum), CI/CD (GitHub Actions), Testing (Unit, Integration, System, TDD), API Development, ORMs

## EXPERIENCE

### National Aeronautics and Space Administration (NASA)

May 2025 – Present

*Software Engineer Intern*

*Greenbelt, MD*

- Built a constraint-based reviewer assignment tool with Google OR-Tools (CP-SAT) and Django, cutting space telescope proposal scheduling from 7 days to under 1 hour while meeting 15+ constraints on bias, workload, and compliance.
- Eliminated timeout failures by implementing asynchronous processing with Celery and Redis, enabling uninterrupted long-running constraint solver jobs and improving user reliability.
- Developed a name disambiguation module leveraging RapidFuzz and nickname heuristics, significantly improving conflict detection accuracy to reduce bias during proposal-reviewer assignment.

### Meta × Major League Hacking (MLH)

June 2025 – Present

*Site Reliability Engineering Fellow*

*Remote*

- Selected for a competitive 12-week fellowship (acceptance rate 10%) under direct mentorship of Meta Production Engineers, applying real-world Software Engineering and Site Reliability Engineering (SRE) practices.
- Built and deployed a production-grade portfolio website using Linux (DigitalOcean VPS), Nginx (reverse proxy, rate limiting), Docker, and MySQL; implemented CI/CD pipelines with GitHub Actions and enforced reliability through TDD with unit, integration, and system tests.
- Integrated Prometheus and Grafana for observability, enabling real-time monitoring, metrics, and alerts to accelerate incident detection and resolution.

### JHU Sports Analytics Research Group

May 2024 – May 2025

*Lead Software Engineer*

*Baltimore, MD*

- Led a team of 9 to build the Atlantic League's first league-wide analytics platform, introducing MLB-style data access and tool sharing to modernize team operations.
- Democratized access to 60,000+ Trackman data points/game by deploying an ETL pipeline (Pandas, AWS Lambda, Docker) and REST API (PostgreSQL, API Gateway); currently used by 10+ developers to build 5+ statistical apps.
- Built and deployed a full-stack web app with Next.js, TypeScript, Express.js, and Tailwind CSS to unify the discovery and use of analytics baseball tools; currently serving 100+ users.

### HopHacks

December 2024 – Present

*Full Stack Software Engineer, Organizer*

*Baltimore, MD*

- Automated deployment for HopHacks website by designing a GitHub Actions CI/CD pipeline, reducing manual EC2 deployment steps by 100% and eliminating downtime via safe, zero-downtime rsync + build promotion strategy.
- Built core full stack features to support 500+ hackers and judges using React, Flask, MongoDB, and Amazon S3.

## PROJECTS & HACKATHONS

### Alibaba Global E-Commerce Challenge (2<sup>nd</sup> / 500+ Global Teams)

- Built an AR "View in Your Space" web app using React, Tailwind, and Google's <model-viewer> to boost Alibaba sales in developing markets.
- Selected as a finalist to pitch live to 70+ Alibaba engineers and executives; earned 2<sup>nd</sup> place globally out of 500+ teams.

### ColdMap

- Built an interactive map-based dashboard in Palantir AIP to visualize upcoming cell therapy shipment risks, showing routes, excursion likelihood, and top contributing factors.
- Built an ETL and logistic regression pipeline using Polars and scikit-learn for shipment risk prediction. Integrated GPT-4o into the dashboard to surface insights, flag high-risk routes, and auto-draft alert emails in natural language.

### Brody Bot

- Automated study room reservations for 20+ students at Johns Hopkins with a configurable Python + Selenium script.
- Bypassed user booking limits using multiprocessing; coordinated concurrent bots and handled race conditions using SQLite.