

# 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, Data Structures, Algorithms, Software System Design, Full Stack Development, Programming in C/C++ on Linux, Computing in Java, Computing in NumPy, Professional Writing and Communication

## TECHNICAL SKILLS

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

**Frameworks & Libraries:** React, Node.js, 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 Design

## 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 system reliability for users.
- Engineered conflict-detection modules, including a name disambiguation system (RapidFuzz + heuristics) and a target coordinate resolver (Astropy), improving reviewer assignment accuracy and reducing bias.

### Meta × Major League Hacking (MLH)

June 2025 – Present

*Site Reliability Engineering Fellow*

*Remote*

- Selected for competitive 12-week fellowship (acceptance rate less than 2.5%) under the direct mentorship of Meta Production Engineers, applying Software and Site Reliability Engineering practices.
- Deployed production-grade portfolio website on Linux (DigitalOcean VPS) with Nginx reverse proxy, Docker containerization, MySQL database, and CI/CD pipelines via GitHub Actions.
- Implemented Prometheus/Grafana monitoring stack for real-time metrics, alerting, and incident response; gained proficiency in Linux system administration and TDD practices.

### JHU Sports Analytics Research Group

May 2024 – May 2025

*Lead Software Engineer*

*Baltimore, MD*

- Led a team of 9 to build the Atlantic League of Professional Baseballs's first league-wide analytics platform, introducing MLB-style advanced analytics 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, AWS 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 a Palantir AIP dashboard to visualize cell therapy shipment risks and contributing factors. Developed an ETL + logistic regression pipeline (Polars, scikit-learn) for risk prediction and explainability, integrating GPT-4o to surface insights, flag high-risk routes, and auto-draft alert emails.

### 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.

## ACTIVITIES

Pava Accelerator, Software Engineering Club, Phi Gamma Delta Fraternity, Golf, Lacrosse, Lifting, Skiing