

# 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, Computer System Fundamentals, Programming in C/C++ on Linux, Professional Writing and Communication

## SKILLS & INTERESTS

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

**Frameworks & Tools:** Docker, Kubernetes, Git, GitHub, React, Next.js, Node.js, HTML, CSS, Pandas, NumPy, scikit-learn

**Cloud & DevOps:** AWS, Linux/UNIX, CI/CD (GitHub Actions), Agile, Testing (Unit, Integration, System, TDD), API Design

**Interests & Activities:** Pava Accelerator, Software Engineering Club, Phi Gamma Delta Fraternity, Golf, Lacrosse, Skiing

## EXPERIENCE

### NASA – National Aeronautics and Space Administration

May 2025 – Present

*Software Engineer Intern*

*Greenbelt, MD*

- Accelerated review cycles for **500+** telescope proposals from **7 days to under 1 hour** by building an AI-powered reviewer assignment system with constraint programming (**Google OR-Tools, Django**), enforcing 20+ optimization constraints.
- Enabled processing of **2+ hour** optimization workflows by implementing **Celery + Redis** async architecture with Flower **monitoring dashboard** for mission-critical telescope proposal reviews.
- Built conflict-detection algorithms (**RapidFuzz, Astropy**) solving name disambiguation and coordinate matching challenges, ensuring **bias-free reviewer assignments** across **\$8 million** in annual telescope funding decisions.

### Meta – Major League Hacking Fellowship

June 2025 – September 2025

*Site Reliability Engineering Fellow*

*Remote*

- Completed 12-week fellowship under the direct mentorship of Meta Production Engineers to design reliable, scalable, production-ready systems with industry-standard SRE practices.
- Deployed production-grade portfolio website on **Linux** (DigitalOcean VPS) using **Nginx reverse proxy, Docker** containerization, and **MySQL** database; gained proficiency with Linux system administration and core **networking** concepts (HTTP, DNS, TCP/IP).
- Built **CI/CD pipelines** with GitHub Actions and implemented **Prometheus/Grafana monitoring** for real-time metrics, alerting, and incident response, enhancing performance troubleshooting, observability, and incident management skills.

### Johns Hopkins Sports Analytics Research Group

May 2024 – May 2025

*Lead Software Engineer*

*Baltimore, MD*

- Directed a **9-person team** to deliver the Atlantic League of Professional Baseball's **first league-wide analytics platform**, providing MLB-caliber data access and tool sharing that modernized team operations.
- Engineered and deployed **ETL pipeline** (**Pandas, AWS Lambda, Docker**) and **RESTful API** (**PostgreSQL, API Gateway**) democratizing **60K+ Trackman datapoints per game** for **20+ developers** building analytics tools.
- Launched a full-stack web app (**Next.js, TypeScript, Express.js, Tailwind CSS**) centralizing analytics tools; adopted by **100+ coaches, analysts, and staff** for data-driven decision-making.

### HopHacks

December 2024 – Present

*Organizer (Website Team)*

*Baltimore, MD*

- Engineered a GitHub Actions-based CI/CD pipeline that fully automated website deployment, eliminating **100%** of manual EC2 deployment steps and achieving **zero-downtime releases** through rsync + build promotion.
- Developed core full-stack features (**React, Flask, MongoDB, S3**) supporting **500+ hackers and judges**, collaborating across **5 functional teams** with Agile workflows to enhance registration, judging, and overall event experience.

## PROJECTS & HACKATHONS

### ColdMap

- Built an AI-driven Palantir AIP dashboard integrating **LLMs** (GPT-4o), **Polars**, and **scikit-learn** to analyze cryogenic shipment data, predict risks, and generate explainable insights for cell therapy cold chain logistics.

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

- Built LEAP, an AR “view in your room” shopping app (**React, Tailwind CSS, Google model-viewer**), designed to integrate with Lazada and boost sales in developing markets by increasing purchase confidence.
- Place **2nd** out of **500+ global teams**; pitched live at Alibaba HQ to **70+ engineers and executives**, including C-suite leaders.

### Brody Bot

- Automated **200+ hours** of study room reservations for **20+ students** at Johns Hopkins by developing a configurable **Python + Selenium** bot, bypassing booking limits with **multiprocessing** and coordinating concurrent bots with SQLite.