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, 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.
- Eliminated **100% of scheduling system failures** by implementing **Celery + Redis** async architecture, enabling uninterrupted processing of **multi-hour optimization workflows** 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*
- One of **less than 2.5% accepted** into Meta and MLH's 12-week Site Reliability Engineering fellowship, collaborating with Meta Production Engineers to design reliable, scalable, production-ready systems.
- 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 (2ⁿᵈ / 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.