Joshua Boss

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EDUCATION

Duke University   Durham, North Carolina
B.S. Computer Science, Minor in Mathematics   *August 2018 – May 2022*

- **GPA:** 3.94/4.00   **ACT:** 35/36   **Honors:** Magna Cum Laude, Dean's List with Distinction
- **Relevant Coursework:** Theory & Algorithms for ML (CS 671), Software Design and Implementation (CS 307), Design and Analysis of Algorithms, Computer Architecture, Data Structures and Alg's, Networking, Combinatorics, Multi Calculus, Linear Algebra, Probability

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, C++, C, PHP, HTML/CSS, SQL, MIPS Assembly
Technologies: Git, ReactJS, Node/Express, Linux, Docker, MySQL, Postgres, Jupyter NB, Pandas, Pytorch, VS Code, G-Cloud, AWS

PROFESSIONAL EXPERIENCE

META (formerly Facebook), *Software Engineer* **– New York, NY**   *September 2022 – November 2022*

- Completed multiple projects across product, mobile, and infrastructure teams using Python, C++, PHP/Hack, React, MySQL, etc.
- Optimized efficiency of IG and FB IOS engineers by implementing numerous full stack features in React and Hack for the GraphQL Mobile Infra team, including a tool helping users find the correct on-call rotations and a table displaying product-specific schema updates
- Advanced GraphQL Mobile Infra's monitoring efforts by building a system from scratch to collect, store, and display categorized time series data for site traffic/engagement; made custom dashboards that help the team track usage trends and test efficacy of new features
- Added feature giving IG Originality engineers the ability to choose specific async jobs to run ad hoc backfills (written in Hack/MySQL)
- Improved ML pipeline reliability by writing A/B and unit tests in python for IG ML's feature extraction service (Fookeep) and ML Ops' model diagnosis service (FBLSim)

YEXT, *Software Engineering Intern* **– New York, NY**   *May 2021 – August 2021*

- Implemented multiple full-stack features for Yext Answers, an AI-powered search experience; wrote client and server-side code with React and Java Play web framework; designed RPC API endpoints to handle backend logic; queried and filtered data from MySQL DB.
- Built table feature allowing Answers admins to view past searches, filter by user, and rate ML model performance (label training data)
- Added feature giving admins quick access to API request URLs and parameters for custom search queries on their testing platform
- Resolved various bugs, redesigned data table structure for key services, built latency telemetry dashboards with Prometheus and Grafana; used domain and test-driven development, dependency injection; reviewed teammates' code, partnered regularly with PMs/designers

ARYEO, *Machine Learning Intern* **– Boston, MA**   *May 2020 – August 2020*

- Developed a deep-learning object detection model that identifies 30 classes of household amenities in images found on Aryeo's real-estate content management service to validate property descriptions and integrate into search feature
- Conducted transfer learning on pretrained RetinaNet model utilizing Pytorch and Jupyter NB, on Google Cloud VM
- Improved model's mean Average Precision (mAP) 10% with ensembling and pseudo labeling; created UI with Streamlit web app tool

LEADERSHIP AND PROJECT EXPERIENCE

Duke Applied Machine Learning Group, *Director*   *November 2020 – January 2022*

- Directed 250-member project-based tech organization offering software and ML development work to corporate and academic partners
- Grew membership 300%, doubled number of projects, fulfilled $50k worth of client contracts; oversaw foundation of multiple initiatives such as "Innovation Studio," a startup incubator, and two internship programs, "Tech for Equity," and "The Phoenix Project"
- Led 9-member board meetings, directed project scoping calls with clients to assess business applications of software/ML, designed student training and onboarding infrastructure, handled legal matters (contracts, invoices, 501c3 status); headed 20-person PM division

BlueZone (https://github.com/BleuZone/BlueZone)   *August 2021 – December 2021*

- Scoped and built Reddit-like webapp in 5-person team for Duke students to communicate anonymously about school related topics
- Added functionality for account creation, profiles, pages/subpages, posting, commenting, searching, up/down-voting, reporting, etc.
- Led MySQL database schema design, implementation, and containerization in docker; wrote server (router, controllers, and models) in ExpressJs and hosted backend on AWS EC2 instance; developed frontend in React/Redux with secure REST API for server interaction
- Headed PM efforts and agile processes; conducted user research/user feedback campaigns to improve product; held weekly sprints

The Project Phoenix Summer Internship Program, *Cofounder, Director*   *April - August 2020, 2021*

- Organized remote summer internship experience, facilitating 240+ paid internship opportunities totaling $350k in stipends for Duke students who lost internships due to Covid-19; acquired CS projects from 80+ companies e.g., Coursera, Twitter, and the US DOD

INTERESTS

Special Olympics, Piano (Jazz/Classical), Fishing, Surfing, Poker, Running (just ran the NYC Marathon!), Miami Dolphins Football