

Brandon Wang

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Education

University of Pennsylvania

May 2024

B.S. in Computer Science, B.S. in Economics (M&T Program) — GPA: 3.9

- **Awards:** HackMIT Hackathon Grand Prize, PennApps Hackathon 2nd Place, JHU Hackathon Grand Prize
- **Courses:** Algorithms (A), Data Structures (A+), Computer Architecture (A+), Operating Systems, ML

Technical Skills

- **Languages/Frameworks:** C++, Java, Python, JavaScript/TypeScript, React/React Native, Rust, SQL, Bash
- **Data Science/ML:** Tensorflow, Keras, PyTorch, NumPy, Pandas
- **DevOps:** AWS, Docker, Kubernetes, Linux, CI/CD (Github Actions/Jenkins/CircleCI), Terraform, Git

Experience

Google

May 2022 — August 2022

Software Engineering Intern (Advanced Technology & Projects)

Mountain View, CA

- Led full-stack software development for a product prototype by integrating 6DoF electromagnetic tracking algorithms, handwriting/gesture recognition, and LaMDA conversational large language models.
- Decreased prototype latency by 80% by writing an ASGI multithreaded web server to read, transform, and stream spatial tracking data at 120 Hz via websockets (**Python, Typescript, Socket.io, Uvicorn, Firebase**).

Five Rings

January 2022 — February 2022

Software Engineering Intern

New York, NY

- Implemented improvements to infrastructure, messaging queues, and algorithms used for proprietary high-performance quantitative trading software and simulation engines (**C++, SQL, Python**).

Salesforce

May 2021 — August 2021

Software Engineering Intern (Cloud Infrastructure)

San Francisco, SF

- Designed a full-stack dashboard and API for monitoring multi-cloud infrastructure health and deployment status, spanning 600+ services across 15 Availability Zones (**AWS, Python, Javascript, Jenkins**).
- Developed DevOps tools for integrating build status data from multiple systems, identifying failing services, and launching automations for deployments, allowing issues to be detected and triaged 40% faster.

Bonfire

April 2021 — December 2021

Cofounder/CTO

Philadelphia, PA

- Building a cross-platform mobile app for young adults to meet others with shared interests via curated local activities and events. Published to the [iOS App Store](#) with 200+ users at launch and raised \$1000+ in funding.
- Architected app frontend, backend, database, and CI tooling. Wrote 10k+ lines of code across 25 UI screens (**Typescript, React Native, Redux, Google Cloud, Github Actions**).

Penn Labs

September 2020 — May 2022

Software Engineer

Philadelphia, PA

- Manage CI/CD pipeline and Kubernetes clusters serving 100k+ users (**CircleCI, Terraform, Grafana, Prometheus**).
- Designed and built Kittyhawk, an open-source [Node.js library](#) to automatically synthesize Kubernetes YAML configurations from reusable abstractions, allowing developers to configure deployments with 70% less code.
- Deployed Kittyhawk across 11 user-facing products at Penn Labs, increasing CI/CD reliability and deployment speed (**Typescript, AWS CDK8S, Node.js**).

UT Southwestern Medical Center

June 2019 — September 2020

Machine Learning Intern

Dallas, TX

- Developed U-net neural network for automatic cell nuclei detection and segmentation in heart tissue (**Python, Tensorflow**), decreasing time required to analyze tissue samples from hours to under 30 seconds.
- Developed an algorithm to recorrect mislabeled medical imaging data using Data Shapley values, enabling top-1 label assignment accuracy of over 90% on sparsely labeled datasets (**PyTorch**).
- Co-first author of peer-reviewed paper published in *Circulation Research* Journal (ranked #3 globally), 2020 AAPM conference Blue Ribbon Poster Award winner, and Regeneron STS Research Competition Semifinalist.