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Daniel Weber

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EDUCATION

JOHNS HOPKINS UNIVERSITY May 2023 | Baltimore, Maryland

BS Computer Science | BS Applied Mathematics and Statistics | BA Mathematics

| GPA: 3.98 / 4.0 | Major GPA: 4.0 / 4.0 | Dean's List (2019-2023)

EXPERIENCE

HANDSHAKE | Software Engineer Intern — June 2022 – Aug. 2022 | San Francisco, California (Remote)

- Proposed an initiative to scale event publishing infrastructure via sharding to achieve an over 10X increase in throughput.
- Autoscaled Kubernetes deployments using Datadog metrics to reliably ensure event processing within minutes of publishing.
- Proposed and implemented a Google Pub/Sub publishing interface that allows developers to asynchronously publish events while maintaining ordering and data consistency.
- Collaborated with developers both on and off-team to push cross-functional goals which improved organizational efficiency and the user-facing experience.
- Increased the observability of our publishing systems by designing and integrating effective traces/metrics which allowed myself and peer developers to identify problems thus sparking new engineering initiatives.
- Technologies: Ruby, Rails, GCP, Google Pub/Sub, Kubernetes, Helm, Datadog, Github

AMAZON.COM | Software Engineer Intern — May 2021 – Aug. 2021 | Seattle, Washington

- Designed and implemented a heap dump analysis tool to aid developers in the optimization of processes utilizing over 250GB of heap memory.
- Collaborated with key stakeholders on the ad infastructure team to find the pain points in the existing optimization process.
- Implemented automation to give developers easy access to up-to-date heap dump files, shortening an 8 hour process to a minutes long task.
- Leveraged CI/CD technology to develop an extensible and resilient platform that can evolve with changing business needs.
- Technologies: Java, AWS, CodePipelines, Git

DISTRIBUTED SYSTEMS/NETWORKS LAB | Security Researcher — Jan. 2021 – May 2021 | Johns Hopkins

- Curated a deep understanding of a large, intricate code base thus allowing me to demonstate key security vulnerabilities at both a protocol and implementation level.
- Crafted a resource consumption attack which downed SPIRE, a fault-tolerant distributed system designed to securely control the US power grid, in under 20 minutes.
- Presented the discovered vulnerabilities and attacks to the Department of Defense who have used it to futher enhance SPIRE.

ALGORITHMS/CS FUNDAMENTALS | Teacher's Assistant — Sept. 2020 – October 2021 | Johns Hopkins

- Taught students key algorithmic concepts like complexity analysis, dynamic programming, and graph traversal while holding office hours and grading HW.
- Educated students in low-level computing concepts like data representation, memory safety, and parallelism while performing code reviews.

FAYE | Machine Learning Intern — May 2020 - Sept. 2020 | Tel Aviv, Israel

- Created a transformer-powered NLU chatbot to replace an off-the-shelf rule-based Google Dialogflow model that dramatically improved customer workflows through context-aware responses and actions.
- Technologies: Python, Javascript, Tensorflow, Rasa, Docker, Google Cloud

DAVID ENERGY | Machine Learning Engineer — July 2019 – Sept. 2019 | Brooklyn, New York

- Curated an extensive dataset of high-quality electricity usage predictors from both internal and external sources.
- Developed machine learning models to predict a building's electricity demand with 97% accuracy and deployed said models to allow for real-time electricity usage prediction.
- Architected a secure AWS cloud solution to allow the company's infastructure to scale as more customers joined the platform.
- Technologies: Python, Git, Tensorflow, Scikit-Learn, AWS

SKILLS

Languages: Python | Java | C | C++ | Ruby | Go | Javascript | Matlab | SQL | LaTeX | x86 Assembly

Technologies: Git | AWS-Certified | Google Cloud | Kubernetes | Docker | OOP | Rails | Postgre | TensorFlow

Hobbys/Interests: Cycling | Hiking | Coffee Drinking | Concertgoing | Piano Playing