

Alden Hallak

Software Engineer

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Experience

Google

New York, NY

Sep. 2024 - Present	Software Engineer NL2SQL tool for highly sensitive NTK financial data <ul style="list-style-type: none">Designed and implemented a tool that utilized Gemini to search through NTK databases.Utilized LangChain, Boq (Kubernetes), Angular Typescript, Java (with PromiseGraphs). Used Spanner to perform Retrieval Augmented Generation (RAG), built service for Shot and resource metadata.Designed a multi-layer highly scalable and modular system, implemented and delegated work. Responsible for pitching, launching, landing.Assuming 4k users send 10 queries per day, generated savings of \$65k/d or \$16M/yr in analyst time.
Feb. 2023 - Nov. 2023	Software Engineer Insights Engine (Financial Analysis Tool) <ul style="list-style-type: none">Built data pipelines on top of Apache Beam that ran scheduled exports, converting generated data to Budget/Plan/Commitment tree format, allowing finance users to drill down into cost centers.Built tool to run ML/AI analytics on batched data.
Sep. 2020 - Apr. 2023	Tech Lead Tool for Monetized Product Launches at Google <ul style="list-style-type: none">Led a small team to build features for a workflow tool for acquiring approval from Tax, Treasury, and Legal services at Google. Used internal proprietary workflow engine, Java (Guice), and Typescript.Responsible for handing off to a team of contractors based in India, training replacements.
May 2019 - Aug. 2019	Intern Google Meet Hardware (GVC) <ul style="list-style-type: none">Using Google's Mediapipe to build applied ML pipelines on Hangouts Meet.

Internships

Summer 2018	Infosys ML/NLP Intern <ul style="list-style-type: none">Built and evaluated vector based and tensor based algorithms for information retrieval, to build an ML search Re-Ranking service. Utilized Tensorflow-Serving and Apache Solr.	Bangalore/Pune, India
Summer 2017	Arteric (Now Relevate Health) NLP Intern <ul style="list-style-type: none">Utilized machine learning and natural language processing to analyze, categorize (topic modeling), and group pay-per-click / AdWords query data with the goal of identifying topically similar queries.	Summit, NJ

Education

University of Pennsylvania

Philadelphia, PA

Class of 2020	Bachelor of Arts Computer Science and English <ul style="list-style-type: none">Cum LaudeExtracurriculars: Systems Administrator for WQHS Radio, Director of Tech It Out! Philly, Director for Under The Button (Under the Daily Pennsylvanian), Resident Advisor, Computer Science TA.
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Skills & Interests

- Proficient: Java, C#, Typescript, HTML/CSS.
- Familiar: Javascript, Python, C++, C, OCAML.
- Outside of English, I speak French (rusty!), and grew up speaking Croatian and Arabic.
- I also enjoy home automation, using HomeAssistant and building devices with Arduino (C++).
- I've built a (small) video game (Unity, Blender) and released it on Steam, to moderate profit !

Awards & Honors

- M.I.T. Lemelson Finalist 2020
- Penn Innovation Prize Semifinalist 2020
- Google Intern Accessibility Hackathon Winner 2019
- Audience Favorite at Penn Film Festival 2018 😊