

Alden Hallak

Software Engineer

New York, NY

alden.hallak@gmail.com

(414) 982-5336

[linkedin.com/in/alden-hallak](https://www.linkedin.com/in/alden-hallak)

Experience

Google

New York, NY

Sep. 2023 - Present	Software Engineer NL2SQL tool for highly sensitive NTK financial data <ul style="list-style-type: none">Designed, implemented, and launched a tool that utilized Gemini to search through NTK databases.Utilized Python (LangChain), Boq, Borg, Angular Typescript, Java (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, delegated, launched.Assuming 4k users send 10 queries per day, generates savings of \$65k/d or \$16M/yr in analyst time.Developed service to generate slides and sheets on financial queries on specified Business Days.
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, using ML/AI to generate data in Budget/Plan/Commitment tree format using, allowing finance users to drill down into cost centers.
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 <p>Bangalore/Pune, India</p> <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.
Summer 2017	Arteric (Now Relevate Health) NLP Intern <p>Summit, NJ</p> <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.

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.
---------------	--

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

- HackerNews [#1](#) Spot Aug 1 2025
- M.I.T. Lemelson Finalist 2020
- Penn Innovation Prize Semifinalist 2020
- Google Intern Accessibility Hackathon Winner 2019
- Audience Favorite at Penn Film Festival 2018 😊