Tomer Aberbach

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Employment

Google · *Java, JavaScript, TypeScript, HTML, CSS, Closure Templates* *Oct. 2023 to Present*
Senior Software Engineer

- Spearheaded the development of high-fidelity Markdown import and export for Google Docs, enhancing its compatibility with numerous content management systems.
- Co-led a foundational rearchitecture of the Google Docs backend, frontend, and data model to implement tabs in Docs, including updating all cross-cutting features, resulting in **~1.75 tabs on average for recently opened documents**.

Software Engineer *Apr. 2021 to Sept. 2023*

- Increased developer productivity by implementing automatic Markdown detection and conversion for Google Docs and Slides, resulting in **~1.2 million automatic weekly conversions**.
- **Boosted Google Docs collaboration by 8%** by developing a real-time email alert system, complete with subscription settings and document diffs for recent edits, that **sends ~300,000 weekly emails**, as a member of a 3-person team.
- Independently empowered Google Docs users with improved data organization by developing an option to split table cells, leading to **~1.15 million weekly cell splits**.
- Jointly implemented code block support in Google Docs, including automatic Markdown detection and conversion, resulting in **~90,000 weekly code block insertions**, with **25% from Markdown conversion**.
- Integrated Gemini into Google Docs to enable GenAI content generation and rewrites, complete with headings, lists, tables, and other rich content, as a member of a large team, resulting in **~150,000 weekly usages**.

Junior Software Engineer *Mar. 2020 to Mar. 2021*

- Streamlined finding new and important comments in Google Docs with comment badging and filtering, **boosting reply creation and comment resolutions by 2%**.
- Developed dynamic Drive sharing emails that automatically update with the latest thumbnail, owner, and edit details via a high-performance endpoint **handling 300 queries per second**, resulting in **6% fewer short sessions** from the emails.
- Simplified Google Docs and Slides authoring with shared prefix substitution rule support, and en- and em-dash substitution, resulting in a **45% increase in substitutions** and no change in undo rates.

Projects

keyalesce · *JavaScript, TypeScript* *June 2024 to Present*

- Developed a high-performance JavaScript package that allows developers to use sequences of values as unique keys.
- Designed **efficient key memoization** using a trie, weak references, and garbage collection callbacks to avoid memory leaks.

parse-imports · *JavaScript, TypeScript* *May 2020 to Present*

- Built a JavaScript package to streamline dependency analysis for library authors.
- Parses ECMAScript module imports, classifies import specifier types, and interprets escape sequences.
- Receives **~33,000 weekly downloads** and used by the AdonisJS web framework.

Lazy Functional Iteration (lfi) · *JavaScript, TypeScript* *Dec. 2020 to Present*

- Implemented a tree-shakeable lazy functional JavaScript iteration library that supports sync, async, and concurrent iteration.
- Designed a **novel "concurrent iterable" protocol** that enables chaining concurrent operations without blocking all values on each operation.

Education

The College of New Jersey (TCNJ) *Fall 2016 to Fall 2019*
BS Computer Science and Mathematics Minor

- **Cumulative GPA:** 3.91/4.0
- **Honors:** Dean's List 7/7 Semesters, Summa Cum Laude, UPE Honor Society

Skills

Programming Languages, Tools, Runtimes, and Libraries:

- *Advanced* — JavaScript, TypeScript, HTML, CSS, Java, Kotlin, SQL, Git, Node.js, React, Remix
- *Intermediate* — Python, Ruby, C, Rust

Expertise: Computer Science, Software Engineering, Full Stack Web Development

Native Languages: English, Hebrew