

# Tomer Aberbach

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## Employment

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**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

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**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

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**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

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### 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