Seokho Song

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SUMMARY

Expertise in browser/JS engine (Blink/V8), web standards, optimization, and frontend with React.

WORK EXPERIENCE

Modusign **April 2021 – Present**
Frontend Engineer, Product Seoul, South Korea

- **Implements a modern SaaS React/Redux-based frontend web application**.
- **Boosted development productivity by 400%** through a state structure overhaul and adoption of the Valtio library. Measured improvement by comparing historical feature delivery times, reducing cycles from two months to two weeks.
- **Ensured robust cross-browser compatibility by adhering to W3C/WHATWG standards** and resolving browser-specific issues (Safari/WebKit, Chrome). Addressed and resolved customer critical incidents (e.g., process crashes) 2-3 times per year, as measured by the count of critical web platform specific issues.
- **Implemented enhanced editor** including multi-select, keyboard navigation, and undo/redo functionalities to improve user editor workflow. Evaluated impact through event tracking via GTM and Mixpanel analytics. Achieved a 25% active user engagement with copy-paste and undo/redo features and a 60% reduction in average adjustment time for editors with fields ≥35.
- **Reduced unnecessary operations and resolved performance bottlenecks** during the field-rendering step in the Editor. Measured improvements using Chrome DevTools' Performance benchmarking tools. Achieved a 500% increase in field-rendering performance.

OPEN SOURCE PROJECTS

Chromium **July 2020 – Present**
Committer Remote, Worldwide

- **Authored 50+ patches in Blink**, improving CSS Layout, Scroll, and DOM standards for a lot of developers and users.
- **Introduced new CSS math functions and degenerated values**—such as calc(infinity * 1px) and cos(45deg)—into the Chromium project and coordinated browser interoperability with WebKit and Mozilla. Measured success through web platform tests, ensuring consistent implementation across browsers. Delivered these CSS standard features as a Feature Owner, successfully shipping in Chrome 111.

V8 **July 2023 – Present**
Committer Remote, Worldwide

- **Co-owned and implemented Float16Array in V8**, extending JavaScript typed arrays and enhancing numerical efficiency in high-performance web applications. Accelerated execution by introducing JIT compilation improvements for Float16 operation in Turbofan and Turboshaft. Validated performance gains through metrics from micro benchmarking JS code. Achieved at least a 300% performance improvement.
- **Optimize Engine Performance** by removing unnecessary operation and implementing a new optimization pipeline, the new mid-tier and top-tier JIT compiler Turbolev and Maglev. Enhance Math.hypot at least 200% faster execution and 60% faster for Math.sqrt and many other Builtin functions.

EDUCATION

Korea National Open University **2025 – Present**
Transferred after completing sophomore to coursework in Computer Science Seoul(Remote), South Korea

Paichai University **2019 – 2020**
Completed freshman and sophomore coursework in Computer Science and Engineering Daejeon, South Korea

- GPA: 4.35 / 4.5