

Robert Helmer

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Professional Experience

Senior Staff Software Engineer – Mozilla Corporation (01/2020 – Present)

- Led technical development of Mozilla Monitor, migrating to Next.js and enabling continuous deployment.
- Created WebExtension-based research studies for Mozilla Rally, collaborating with Stanford and Princeton.

Staff Software Engineer – Mozilla Corporation (06/2015 – 01/2020)

- Led Firefox client engineering for Experiments Program, integrating privacy-preserving Telemetry (Prio).
- Enhanced WebExtensions API, improved add-ons management, and contributed to Firefox performance initiatives.

Senior Web Developer – Mozilla Corporation (09/2010 – 06/2015)

- Led high-volume crash reporting system (Socorro), migrating infrastructure to AWS and improving Etherpad.

VP of Technology – CustomWeather (06/2008 – 09/2010)

- Managed AWS-powered weather mapping, built real-time weather services, and automated deployments.

Research Contributions

- **Collaborator** – *Rally and WebScience: A Platform and Toolkit for Browser-Based Research on Technology and Society Problems* (Princeton University, Nov 2022)
Developed core software components for Rally, supporting privacy-conscious research analyzing 4.4M webpage visits from 1,817 participants. [Read more](#)
- **Collaborator** – *Protecting Privacy by Splitting Trust, a dissertation* (MIT CSAIL, Dec 2019)
Contributed to libprio, a privacy-preserving aggregation library, and integrated it into Firefox. Acknowledged in the doctoral dissertation. [Read more](#)

Technical Skills

- **Languages:** Python, JavaScript (Node.js, ES6+), Java, C++, Rust, Bash, SQL.
- **Technologies:** PostgreSQL, MySQL, Django, Flask, Next.js, WebExtensions, Git.
- **Expertise:** Web & browser development, cloud infrastructure, real-time data processing.