

Joan Smith

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EXPERIENCE

Google, New York, NY

05/2016 — present

Staff Software Engineer - Senior Tech Lead

Senior Tech Lead for Infrastructure storage, responsible for the technical direction of 60 SREs and the reliability, efficiency, and operations of Bigtable, Spanner, AppEngine Storage, and CloudSQL. Personally spearheaded the XX% improvement of Spanner compute and storage utilization. Promoted to Staff SWE.

Founding Tech Lead for Cloud Capacity Forecasting. Led a team to build a platform for forecasting the hardware requirements of Google Cloud products using statistical modeling. Architected a hybrid solution on GCP and Google's internal stack.

Bigtable Site Reliability Engineer. Led a 2 year transformational project to migrate a critical high-throughput user-data store between Bigtable instances. Received a double promotion and a Feats of Engineering award. Participated in on-call rotation and incident response.

Cold Spring Harbor Laboratory

08/2015 — present

Bioinformatics Data Analysis, Laboratory of Dr. Jason Sheltzer

Designed and implemented a system for analyzing genomic sequencing data to identify molecular alterations associated with cancer disease progression. Published a first-author research [paper](#) and built a [website](#) to facilitate public access to this biomarker analysis.

Twitter, Cambridge, MA

05/2014 — 12/2015

Software Engineer II, Crashlytics

Instrumental member of an agile team developing a product to help mobile developers release beta distributions of their applications. Scaled the product from launch to a million app releases.

Conceived and executed a Node.js project to improve the development/test environment for ~50 engineers by implementing a tool to orchestrate Docker containers for local development.

Ran Girls Who Code club and summer program at Twitter Boston. Women in Engineering site lead.

Oracle, Burlington, MA

09/2012 – 05/2014

Software Developer II, Scalability for Solaris Servers

Reduced OS scalability issues by developing solutions to minimize lock contention, lower memory bus usage, decrease cache miss rates, and increase algorithmic performance.

Emphasis on cache aware algorithms, kernel memory allocations, boot time, and trap handling.

Accenture, Boston, MA *Consulting Analyst, Infrastructure Security.*

Summer 2011

Apple, Inc., Cupertino, CA *Software Engineering Intern*

Summers 2009 and 2010

Expertise in: Python, Go, Reliability Engineering, Databases, Incident Response, C, Clojure, Node.js, SQL, Bash, Java

Publication list, code, and writing: <http://joans.io>

PAPERS AND TALKS

- [SRE Tools as Products](#), IEEE

- **Smith, J.C.**, Sheltzer, J.M. (2018). [Systematic identification of mutations and copy number alterations associated with cancer patient prognosis](#), eLife 2018, 7:e39217. Press: [GenomeWeb](#), [Newsday](#).

- Vasudevan, A., Baruah, P., **Smith, J.C.**, (et al) (2019). [Single chromosome gains can function as metastasis suppressors and metastasis promoters](#) (preprint).

- Giuliano, C.J., Lin, A., **Smith, J.C.**, Palladino, A.C., Sheltzer, J.M. [MELK expression correlates with tumor mitotic activity but is not required for cancer growth](#), eLife 2017, 7:e32838.

- [Rapid Development and Reliable Testing with Docker](#), Twitter Flight 2015.

- Sheltzer, J.M. and **Smith, J.C.** (2014). [Elite male faculty in the life sciences employ fewer women](#). PNAS 111, 10107–10112. Press: [Slate](#), [Time](#), [Washington Post](#), [Boston Globe](#).

EDUCATION

Massachusetts Institute of Technology

Graduated 6/2013

B.Sc. in Physics.

Coursework included Theory of Computation, Structure and Interpretation of Computer Programs, Performance Engineering of Complex Software Systems, and Quantum Physics.