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Samer Masterson

Experience

June 2020– Present

Google, *Senior Software Engineer*, Search Infrastructure.
- **Leading** project to create new, more efficient tracing system for search documents.
  - The new system **saves $400k/year** in operational cost (machines, disk) because of increased efficiency.
  - The system uploads artifacts for **100+ billion docs** at **290 Gbps** at peak.
  - **Designed and implemented** the system. Used **C++**, protobufs, Spanner database.
  - Leading a small team to build on top of the system to ingest the traces.
  - **Deleted 35k lines of dead code** for the previous tracing systems.
- Unblocked and currently rolling out new service for ingesting websearch documents.
  - The service handles **7,000 requests per second** at peak (**430 million requests a day**).
  - Joined the project half way through because someone left the company. Implemented the remaining functionality quickly to ship ahead of schedule. Used C++, protobufs, Spanner.
  - Wrote the rollout plan, currently **rolling out to 25 datacenters** globally.
- **Built and shipped v1** of the Google-managed control plane, **a new Google Cloud (GCP) service**.
  - Specifically built the provisioning, data plane (on CloudRun), and rollout systems. https://cloud.google.com/service-mesh/docs/overview#managed_anthos_service_mesh
  - Implemented in **Go**. Used protobufs, Spanner.

September 2015– March 2020

Dropbox, *Senior Software Engineer*, Backend and Desktop.
- Lead project to **reduce the overall crash rate** of the Dropbox **desktop client** for Windows, and **successfully reduced it by 46%**.
  - Drove the project from its inception by highlighting the high crash rate and **working with management to staff the project**. **Designed the new architecture to minimize risk** and had the design successfully reviewed by principal engineers. Implemented in **C++** and rolled out the new architecture.
- Implemented and rolled out **server-side React Node.js service**.
  - Improved time-to-render for the Dropbox.com files page by **3.5 seconds**. Handles **20 million requests a day**.
- Converted **1,200** Coffeescript files to **Typescript**.
  - Wrote **automatic conversion tools** to migrate Coffeescript to Typescript with minimal manual effort.

September 2014– May 2015

Sourcegraph, *Backend Software Engineer*.
- Deployed on **AWS** using **Docker** and **Ansible**. Used **Go**, **Postgres**, **S3**.

Technical Skills

Languages:	Expert: Go, Python Proficient: C++, JavaScript, TypeScript	Technologies:	Linux, Postgres, Docker, AWS, Desktop, Windows, React, Protobufs
GitHub:	github.com/samertm	Text Editor:	Emacs

Education

2012–2013

Computer Science and Mathematics coursework, *George Mason University*.
Relevant Coursework: Introduction to Data Structures, (Honors) Introduction to Object-Oriented Programming, Discrete Mathematics, Calculus I–III, Differential Equations, Linear Algebra.
Honors: Dean's List Fall 2012, Spring 2013.