

Thomas Gebert

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Computer skills

Java 21	Apache Spark	F#	TLA+
Python	GCP	Go	Vert.x
SQL	Erlang/OTP	JavaScript	Docker
Clojure	Linux	Node.JS	
.NET Framework	Shell Scripting	Scala	
Kafka	C++	FFMpeg	

About

Professional Software Engineer with more than a decade of experience across backend systems, distributed infrastructure, and high-performance computing. Known for delivering cost-saving platform redesigns and mentoring engineers in concurrent and functional programming. Former staff engineer at Walmart and senior engineer at Apple and Reddit.

Education

Western Governor's University **Salt Lake City, UT**
B.S. Computer Science

Western Governor's University **Salt Lake City, UT**
M.S. Computer Science

University of York **York, United Kingdom**
Graduate Studies in Computer Science

- Conducted research in Formal Methods and Robotics, including model checking and algorithmic proof systems like Isabelle, Haskell, and FDR4.
- Built and evaluated verification tooling for robotic systems, emphasizing correctness under concurrent execution.
- Completed 3 years of advanced coursework and independent research.
- Departed program in good standing to pursue high-performance computing roles in industry.

Experience

Schrodinger

Senior Software Engineer

New York, New York

February 2024 – April 2025

- Maintained topology of Kafka Streams applications.
- Augmented RocksDB and optimized write throughput on streaming applications.
- Replaced the use of RocksDB with a custom backend using PostgreSQL.
 - Achieved roughly 50% the performance while cutting cloud storage costs down by 80%, and reduced duplication across nodes.
 - Utilized Vert.x, Caffeine Caches, Bloom Filters, LMAX Disrupter, and various heuristics to minimize latency without overwhelming the system.
- Utilized Google Cloud Platform to deploy and maintain distributed applications.

CUNY City Tech

Adjunct Lecturer (Contract)

New York, New York

August 2022 – June 2023

- Taught introductory programming to computer engineering students.
 - Introductory and advanced Python 3 and Java 17.
- Created and graded homework assignments and tests.
- Coded interactive learning modules in JavaScript and Python for students to practice.
- Worked with professors designing cyber-physical systems to help formalize robotics applications.
- Given a perfect score for teacher reviews for two semesters in a row.

Reddit Inc.

Senior Software Engineer

New York, New York

August 2022 - November 2022

- Redesigned Reddit's image resizing pipeline in Python and Go, reducing infrastructure cost by 40%. Shipped production code to GCP and improved reliability metrics. Laid off during company-wide restructuring.

Walmart Global Tech

Staff Software Engineer

New York, New York

August 2021 – August 2022

- Mentored junior and mid-level engineers in distributed computing and functional programming.
- Made use of message queues to schedule and partition work across multiple nodes.
- Delegated and managed work across several engineers when designing distributed systems.
- Built NLU pipelines for the Chatbot on walmart.com utilizing the Microsoft Bot Framework.
 - Utilized the Microsoft Bot Framework, F# and C#.
- Architected the multi-cluster design of the Chatbot.
 - Decreased chatbot latency by over thirty percent across multiple clusters.
 - Coordinated the release of multi-cluster deployment of chatbot.
- Utilized Microsoft Azure, Linux, and Python to build infrastructure.
- Designed and built APIs with GraphQL.

Thrive Global

Contract Engineer

New York, New York

March 2021 – August 2021

- Utilized Node.js to build the localization features.
- Used Docker to build microservices.
- Wrote build scripts in Python.

Apple Inc.

Senior Software Engineer

New York, New York

September 2018 – February 2021

- Designed and built a telemetry and analytics system for finding potential bottlenecks in the cache indexes utilizing Java 11, Clojure, Kafka, Apache Spark, and Tableau.
- Fixed issues and bugs in the iTunes server backend.
- Built a Kafka-based buffering service to reduce load on indexing and caching for iTunes.
- Maintained and expanded rule engine for iTunes, utilizing Objective-C and C++.
- Deployed Java code onto Amazon Web Services and Linux.

Walmart Global Tech (Jet.com)

Senior Software Engineer

Hoboken, New Jersey

July 2016 – August 2018

- Wrote Microservices in F#.
- Utilized the Microsoft Azure stack.
- Used Apache Kafka to send data between services.
- Utilized Python in conjunction with Apache Spark ML to figure out optimal time to send email.
- Rebuilt the transactional email system to scale to Jet.com size.
- Taught the F# language during code bootcamps.

Tone Mobile

Software Engineer

New York, New York

September 2015 – June 2016

- Wrote and maintained Erlang backends.
- Created modules for Ejabberd.
- Integrated chat server with Node.js backend.

New York University

Research Scientist

New York, New York

March 2015 – September 2015

- Debug Angular.JS frontends.
- Debug Scala backends.
- Help write Haskell backends.
- Programmatically use FFMpeg for video transcoding.

Sq1

Application Developer

Dallas, Texas

May 2014 – February 2015

- Used the Joomla and Wordpress CMS systems to build websites for advertising clients.
- Wrote backends in Node.js.

Senico, LLC

Software Engineer

Dallas, Texas

June 2013 – April 2014

Propulsion Labs

Software Engineer

Dallas, Texas

January 2013 – June 2013

Amerinational Management Services

Web Developer

Orlando, Florida

January 2012 – December 2012

Lockheed Martin

Software Engineering Intern

Orlando, Florida

May 2011 – August 2011

Public Speaking

Lambda Days 2023 – Why Design Your Own Levels When Your Computer Can Do it?:

Presented an introduction to doing WebGL with ClojureScript, in addition to showing a few simple procedural level generation algorithms for games

Lambda Days 2022 – Predicting and Preventing Chaos with Formal Methods in TLA+:

Presented in Krakow, Poland, an introduction to formal methods via a brief description and demonstration of the TLA+ specification language.

Lambda Days 2020 – Distributed Hash Tables, Video, and Fun!: Presented in Krakow, Poland, the same talk as stated above.

Clojure Conj 2019 – Distributed Hash Tables, Video, and Fun!: Presented in Durham, North Carolina, a demonstration of a project involving a video sharing system using distributed hash tables and to farm out video transcoding.