# **Thomas Gebert**

# Computer skills

Java 17 Linux Go .NET Framework

PythonShell ScriptingKakfaScalaSQLZeroMQJavaScriptFFMpegClojureC++Apache SparkTLA+

Erlang/OTP F# Node.JS

### **Education**

### Western Governor's University

Salt Lake City, UT

B.S. Computer Science

## Experience

Lead bank New York, New York

Senior Software Engineer

September 2023 – November 2023

- O Helped scale and maintain the ACH processing system.
- O Worked with AWS Lambda, AWS Step Functions, Go, Java, and DynamoDB.

#### **CUNY City Tech**

New York, New York

*Adjunct Lecturer* (*Contract*)

*August* 2022 – *June* 2023

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

Reddit Inc. New York, New York

Senior Software Engineer

August 2022 – November 2022

- O Used Python, Go, and Docker to help rebuild the image resizing service.
- O Utilized Kafka to build distributed systems.
- O Wrote build configuration scripts in Python.
- Decreased cost of image resizing by over forty percent by moving service in-house instead of outsourcing.

**Walmart Global Tech** 

New York, New York

Staff Software Engineer

*August* 2021 – *August* 2022

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

Thrive Global New York, New York

Contract Engineer

*March* 2021 – *August* 2021

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

Apple Inc. New York, New York

Senior Software Engineer

September 2018 – February 2021

- O 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.
- O Fixed issues and bugs in the iTunes server backend.
- O Built a Kafka-based buffering service to reduce load on indexing and caching for iTunes.
- O Maintained and expanded rule engine for iTunes, utilizing Objective-C and C++.
- O Deployed Java code onto Amazon Web Services and Linux.

### Walmart Global Tech (Jet.com)

Hoboken, New Jersey

July 2016 – August 2018

Senior Software Engineer

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

Tone Mobile New York, New York

Software Engineer

*September* 2015 – *June* 2016

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

### **New York University**

New York, New York

Research Scientist

*March* 2015 – *September* 2015

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

Sq1 Dallas, Texas

Application Developer May 2014 – February 2015

Senico, LLC Dallas, Texas

Software Engineer June 2013 – April 2014

Propulsion LabsDallas, TexasSoftware EngineerJanuary 2013 – June 2013

Amerinational Management Services
Web Developer
Lockheed Martin
Software Engineering Intern

Orlando, Florida January 2012 – December 2012 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.

# **Side Projects**

**FSharp.Csv**: A reflection-based CSV serializer, written in F#, designed to handle large, multigigabyte CSV files, while providing a simple, functional interface, and remaining relatively fast.

**Vertigo.Json**: A reflection-based JSON serializer and deserializer, designed to be used with F#, with an emphasis on being easy-to-use, fast, and null-safe.

For more, please visit gitlab.com/tombert