

# Chaim Halbert

Phoenix, AZ 85016, local to area or remote

[github.com/chaimleib](https://github.com/chaimleib) — [linkedin.com/in/chaim-halbert](https://linkedin.com/in/chaim-halbert) — [chaim.leib.halbert@gmail.com](mailto:chaim.leib.halbert@gmail.com)

## SUMMARY

Experienced Go, TypeScript, C# .Net and Python Software Developer with diverse technology background. Experience working with Google Cloud Platform and other cloud technologies, eager to create user-friendly programs and intuitive designs. Experience leading migrations, architectural reviews, and working with users and stakeholders to understand pain points and accessibility. Driven to create maintainable, secure, performant and scalable applications.

- Backend, full-stack, touch-grass explanations for non-technical people
- Protect privacy, empower the customer

## PROFESSIONAL EXPERIENCE

### Senior Software Engineer, American Express, contract via Turnberry Solutions, Inc. (October 2024 - current)

**Audited PaaS authentication/authorization system for security and maintainability:** Eliminated DoS vulnerabilities, established coding style standards and linting, doubled test coverage. *Go, LDAP, Node.js, Postman, Kubernetes*

**Created CLI interface to web API service:** Improved request speed by 10x over prior server-side solution by optimizing backoff strategies and introducing concurrency with goroutines and channels. *Go, Linux, bash*

### Software Engineer, Amazon, contract via Harvey Nash (June 2024 - September 2024)

**Migrated dynamic Homepage service between cloud clusters in Europe:** Checked dependent service support and confirmed compatibility prior to upgrades for new cluster location. (Originally interviewed for Typescript, Python and cloud architecting; then the project changed from the job description). *Amazon internal tooling, AWS, bash*

### Senior Golang Software Engineer, Bank of America, contract via Randstad USA (April 2023 - May 2024)

**Added secrets management capabilities to compute resource provisioner:** Automated process to provision internal applications on OpenShift Cluster/Kubernetes. *Go/Golang, Hashicorp Vault, OpenShift Cluster/Kubernetes, Cobra, Gorm, Gin, Swagger (Swaggo), postgresql, BitBucket, Agile*

**Mentored other engineers in Linux setup and Golang:** Documented onboarding processes and guided other devs in setting up Linux servers. *Linux, bash, Git Bash, postgresql, ssh, Go, golanci-lint, Jenkins, Markdown, Confluence*

### Cloud Software Engineer, Evernote (June 2016 - February 2023; Redwood City, CA four years; then remote in Phoenix, AZ)

**Led the re-architecting and migration of evernote.com from PHP with AWS to Go and C# with Google App Engine:** My system design was in production for seven years, until Evernote changed hands and moved. Recursive component template system; 26-language localization system; CMS integration for non-programmer edits to site; tooling for deploy, preview, unit test, and code quality; query tools to answer high-level questions about the web service. *Google Cloud Platform, AWS, Ubuntu, Debian and Alpine Linux, Docker, Kubernetes, git, Go/Golang, C#, Perl, PHP, Java, bash, dash, zsh, Python, MySQL, NoSQL, Redis, JavaScript/Node.js, Jenkins CI, webpack, React, yarn/npm, SASS, awk, grep, sed, jq, SRE*

**Content Delivery Network (CDN):** Host images for Iterable emails and load-balance them across the globe. *Google Cloud Storage*

**Browser-based note editor and checkout flow:** Improved the online flagship app. *Typescript, Webpack, yarn, React, Redux, Java, Maven, bash*

**Google Cloud Platform:** load balancing, scaling, hosting, URL routing and event routing. *App Engine, Cloud Functions, Cloud Storage, Pub/Sub, StackDriver, BigQuery, KMS secrets management, HAProxy*

**Communication:** Translates Computer-ese to English. Coordinated code changes with Security, App, Translation, Design, and Marketing teams; guided other teams in modifying our team's projects; onboarded and trained new team members; presented site architecture to new management; wrote High-Level Design documents and cost analyses; documented team processes and APIs. Convenes cross-functional teams for root-cause analysis of service interruptions. *Slack (+ API), Atlassian JIRA and Confluence, BitBucket, DataDog, PagerDuty*

## EDUCATION

**University of California, Berkeley – B.S. program in Electrical Engineering and Computer Science**  
(August 2008 - March 2014)

## SKILLS SUMMARY

**Coding:** More than 20 years of experience. Recent experience in *Go/Golang (8 yrs, current primary language), C# .Net (11 yrs), JavaScript/Node.js (15 yrs), Python (16 yrs), TypeScript (8 yrs, incl. Flowscript), C (17 yrs), MySQL (13 yrs), bash (22 yrs), zsh (6 yrs), awk (8 yrs)*; less recent and occasional experience in *Java (13 yrs), PHP (14 yrs), ash (6 yrs) and dash (8 yrs), Perl, C++, Objective-C, Swift, Matlab, Octave, Verilog, Visual Basic .Net, Lua, ladder logic, PLC structured text/IEC 61131-3, Scheme, LISP*. Can write parallel and concurrent code. Creates *parsers, compilers and interpreters* for new mini-languages. >50 languages; learns new ones quickly.

**Web technologies:** Full stack web and cloud development using *GCP (7 yrs), AWS (2 yrs) and OpenShift (1 yr); MySQL (13 yrs), PostgreSQL (2 yrs), NoSQL (8 yrs), React (7 yrs), Angular (1 yr), jQuery (13 yrs), Webpack (8 yrs), npm/yarn (8 yrs), Docker/Podman (8 yrs), Express.js (3 yrs), Django (1 yr), Flask (1 yr), Kubernetes (2 yrs), Elasticsearch (1 yr), Redis (1 yr), CouchDB (1 yr), Thrift (2 yrs), Protobuf (2 yrs), SRE (7 yrs), Splunk (1 yr), Datadog (6 yrs), PagerDuty (on-call 4 yrs)*.

**Systems architect:** Designs long-lasting build systems and cloud apps, and procedures for the problem and the team, some of which ably served in production for seven years. Willing to break from convention for the sake of simpler, nimbler code. Customizes improvements to the training, tooling and architecture for the sake of the team.

**Algorithms and Data Structures:** *recursive data structures and algorithms, big-O memory and performance analysis, robot control with state machines, machine learning, OCR, pathfinding, 3D graphics and raytracing, operating systems, filesystems, relational and nonrelational databases*

**Continuous Integration and End-to-End Testing:** *Jenkins (8 yrs), TravisCI (13 years), CircleCI (1 yr), GitHub Actions (1 yr), Selenium (8 yrs), headless Chromium (1 yr), Docker (7 yrs)*

**Other:** Uses Fedora Linux as daily driver. This resume was written in vim using Markdown, and rendered using a Makefile, pandoc, headless Chrome, and a Python DOM manipulation script. Licensed commercial drone pilot (since August 2024). 3D printing, using self-designed models in Blender and FreeCAD.

## NOTABLE PERSONAL PROJECTS

**[github.com/chaimleib/intervaltree](https://github.com/chaimleib/intervaltree)**, 2014 onward. Modify and query intervals in logarithmic time in pure Python 2/3. This is the industry reference implementation of interval trees in Python, cited in numerous academic research papers for genome research, computer vision applications, etc. *Python, data structures, open source, CI, GitHub, TravisCI, GitHub Actions, Docker*

**Pyenv v2.3.14, [github.com/pyenv/pyenv](https://github.com/pyenv/pyenv)** February 2023. Added patches for Python's source code, versions 3.6 and 3.5, fixing compilation for modern OSes on x86\_64 and Apple M1 processors. *C, patchfiles, GitHub, pyenv, Python, open-source*

**Completed Linux From Scratch** twice, in 2006 and 2021 ([linuxfromscratch.org/lfs](http://linuxfromscratch.org/lfs)). Compiled and configured a complete OS from C/C++ source code. *Linux, OS, boot sequence, bash, Makefile, X11*

**Built USB input devices:** Built a retro joystick controller that works over USB using Atmega32u4 microcontroller and custom-coded firmware. Customized mechanical split keyboard. Designed and built a USB Nintendo 64 Cartridge reader in 2014. *C, Atmel microcontrollers, GNU Make, GCC, cross compilers, firmware development, embedded systems, serial communication, USB protocol*