Austin Anderson

austin@angerson.org – @angerson on GitHub

EXPERIENCE & EDUCATION

Google, Inc – ML Developer Velocity ··· 2016 – 2024
Senior Software Engineer – Mountain View, CA

- Lead maintainer of CI system and packaging pipeline for TensorFlow (TF) Python packages, installed millions of times per month with dozens of commits per day, with tests covering Windows, MacOS, and Linux platforms and CPU, GPU architectures
  - Vastly reduced SWE-time maintenance costs of over 100 CI jobs, and enabled single-command local replication of any CI job for any developer, by rewriting huge 5-axis-matrix CI script suite into minimal set of scripts (see GitHub)
  - Enabled internal developers to launch presubmit CI jobs and replicate past failures on-demand in one simple command by designing Python CLI tool that bridges 4 internal APIs
  - Streamlined public TF CI monitoring by creating statically-generated GitHub commit status dashboard that is applicable to any GitHub repository (see GitHub)
  - Enabled developers to test changes locally and enabled parallel releases for TensorFlow by converting VM images to Docker containers now used across TF ecosystem (see GitHub)
  - Enabled TF Lite to launch with TensorFlow 2.0 tf.contrib removal by automating must-be-done-all-at-once change to 30,000+ Google-wide CI targets, in five languages, affecting 3,000+ internal files and 1,000+ OSS files (see GitHub), without incurring any significant CI errors or code freezes
  - Enabled one-day isolation of bad changes in TensorFlow by designing culprit-finder scripts, tools, and dashboard using Python, Bash, BigQuery, and SQL
  - Saved 2 weeks of SWE time per quarter by designing automated tooling to handle the TensorFlow PyPI and GitHub TensorFlow source code release process
- Chair and lead for TensorFlow SIG Build, a community group including members from PyPA, RedHat, NVIDIA, Intel, Amazon, and IBM dedicated to improving TF packaging on various platforms
  - Kickstarted and led discussions between stakeholders from different companies that ultimately resulted in PEP 599, which allows all Python projects to use more modern compilers

BSc. Computer Science ·· 2012 – 2016
Clemson University, SC

RECENT PERSONAL PROJECTS

- **Custom Set Cards** — Elegant generate-and-print pipeline for custom variants of the card game "Set" made with Krita, Python, bash, and ImageMagick.
- **Gomoku** — 3D five-in-a-row computer game with smooth and functional UX elements created in Godot and Blender.
- **Comic preprocessor** — Zero-effort tool that preprocesses comic books, without scaling artifacts, for use on an e-ink reader using Imagemagick and bash.
- **FFmpeg for MyNoise** — Proof-of-concept ffmpeg-based audio engine for infinite multi-channel white noise streams on an Android app, leading to gift from MyNoise creator.

SKILL HIGHLIGHTS

Languages	Expert: Bash, Python, Ruby — Experienced: Go, JS, Java, PHP, C++, GDScript
Spoken Languages	English (native), 日本語 (intermediate)
Dev Ops	Docker, GitHub Actions, Git, Terraform, Ansible, Packer
Google Ecosystem	Google Cloud Services, GCL, Blaze/Bazel, Starlark
Web	Greasemonkey/Javascript, HTML+CSS, jQuery, Flask, SQL
Everything Else	Quick on the uptake