Mason Wilde

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Work Experience

Senior Software Engineer *Apr 2025 - Present*
Canary Technologies - Voice AI Remote

- Designed and built an agentic orchestration layer to dynamically route voice calls to specialized agents, replacing a monolithic pipeline and cutting new feature development time from weeks to days with a 50% reduction in end-to-end latency
- Engineered retrieval-augmented generation tooling and agent prompting strategies powering OpenSearch-based knowledge lookups across the agent fleet, driving a 92% autonomous handle rate on informational calls
- Created evaluation and benchmarking infrastructure for automated prompt regression testing and model comparison, reducing validation cycles from minutes to seconds and gating deployments against quality regressions
- Built an independent failover routing service ensuring uninterrupted call handling during primary system outages across hotel partner integrations
- Developed an automated post-call analysis pipeline processing 50K+ calls daily, combining deterministic labeling with LLM-driven quality evaluation to identify systemic issues and agent performance trends

Senior Software Engineer *Aug 2019 – Mar 2024*
Google - Chrome OS Boulder, CO

- Led performance verification in an expedited kernel upgrade by identifying and resolving regressions, expanding automated test coverage, and completing the project in 20% of the time needed for previous efforts
- Refactored a Postscript Printer Description file pipeline used by 20+ OEMs, adding staging channels for rapid validation and reducing bugs reaching production by 90%
- Coordinated a 10+ engineer effort to upgrade, test, and triage a critical printing system daemon, completing the effort in half the time estimate
- Upgraded reporting infrastructure to incorporate in-depth printing and scanning analytics, ensuring data confidentiality and reducing triage and resolution efforts by 50%
- Mentored 3 entry-level developers, assigning starting tasks, monitoring progress, and guiding the transition to full-time independent contribution
- Engineered an automated tool to streamline project setup and enforce secure access-control lists, reducing file structure creation time from hours to minutes and eliminating manual configuration errors

Site Reliability Engineering Intern *May 2018 – Aug 2018*
Google - Cloud Infrastructure New York, NY

- Extended a distributed infrastructure service with load-balancing and configuration management across 1000+ instances, increasing service capacity by a factor of 100
- Expanded a Go numerical utility library with exponential weighted moving average implementations for smoothing bursty load signals from server tasks, adopted by 50+ projects across Google

Engineering Practicum Intern *May 2017 – Aug 2017*
Google - Protected Data Programs Los Angeles, CA

- Designed machine learning pipelines integrating private data systems across 10+ sources, enabling developers to train and validate models against real data and reducing iteration time by 80%
- Developed a command line tool to generate boilerplate code for experimental configuration files, reducing the time to create an experiment by a factor of 10

Research

Undergraduate Research Assistant *May 2016 – May 2019*
Cognitive Control Systems Lab - University of Kansas Lawrence, KS

- Researched and implemented computational models of emotion's effects on creativity and goal completion within ICARUS cognitive architecture agents in Common Lisp

Projects

WildeLab Home Infrastructure *Active*
VLAN-segmented home rack environment with Wireguard VPN tunneled through a VPS endpoint, dnsmasq service discovery at *.wildelab.com, and fully Ansible-provisioned bootstrap with automated updates and reconciliation. Hosts a self-hosted LLM inference server, chat application, and game servers.

GPU SNN Kernel *Completed*
Developed a custom GPU kernel for parallel spiked neural network simulations using HIP and hipSPARSE, targeting both HIP/CUDA and ROCm backends for portable high-performance neuron state updates and spike propagation

Neuromorphic SNN Simulator *In Progress*
Building a neuromorphic spiked neural network simulator exploring sleep cycle-driven learning mechanisms

Education

University of Kansas *May 2019*
Bachelor of Science in Computer Science with Highest Distinction Lawrence, KS

Awards and Leadership

University of Kansas Chancellor's Scholar *2015 – 2019*
University of Kansas Self Engineering Leadership Fellowship Cohort Lead *2015 – 2019*
University of Kansas Dean's List *2015 – 2019*
University of Kansas ACM Student Chapter President *2017 – 2018*

Languages and Technologies

Languages: C++, C, Python, Go, Rust, HIP/CUDA, JS/TS, Haskell, Common Lisp, BASH

Technologies: PyTorch, TensorFlow, NumPy, Pandas, Scikit-learn, OpenSearch, Django, Svelte, LiveKit, Linux, Google Cloud, PostgreSQL