KEVIN FAIRLEY

AI Researcher — Agentic Systems, Evaluation & Reliability

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PROFESSIONAL SUMMARY

AI researcher focused on making LLM agents measurable and dependable. Builds open-source tool-calling agents, multi-agent systems, eval harnesses, regression gates, and code-enforced guardrails, directing AI coding agents, and publishes reproducible results and failure analyses. Marine Corps veteran with server and data-workflow experience. Seeking AI Research Engineer / Applied AI roles (LA or remote).

RESEARCH & PROJECTS (open source: github.com/kfairy9999/<project>)

mini-agent — Tool-calling agent with self-check and eval harness | Python
- Built a provider-agnostic agent loop (OpenAI-compatible; Groq, Gemini, OpenAI) with calculator, sandboxed Python, and web-search tools, a step budget, a required self-check, and rate-limit-aware retries
- Designed a 15-task eval with automated checkers: 14/15 (93.3%) on a hosted Groq model; published failure analysis showing the self-check accepted an off-by-one answer, motivating a re-execution verifier

agent-crew — Multi-agent research desk | TypeScript, Cloudflare Workers, React
- Planner, researcher, writer, and critic agents share a blackboard; controls live outside the model: a deterministic check rejects citations to unretrieved sources, a capped critic loop, a token/dollar budget

llm-watch — LLM call ledger and eval regression gate | Python, FastAPI, React
- Logs each LLM call's tokens, latency, and cost; gates model swaps in CI with an eval suite (regex, JSON-schema, LLM-judge scorers), a paired bootstrap 95% CI, and pass-to-fail flip detection

hermes-phone-agent — Guardrails for an open-source agent's phone/SMS skills | Python
- Wrapped Nous Research's Hermes Agent telephony skill with guardrails enforced in code, not prompts: allowlist, confirmation, call/text/spend caps, quiet hours, and an append-only audit log; mock-by-default providers

fast-tokenizer — Byte-level BPE tokenizer | Rust, Python (PyO3)
- Exact GPT-2 token parity with tiktoken on 905,180 tokens; about 2.5× tiktoken's single-thread speed from Python and 155.7 MB/s with 4 threads

TECHNICAL SKILLS

AI/ML: LLM agents, tool calling, multi-agent orchestration, evals and regression gates, LLM-as-judge, guardrails, audit logs, token/cost budgets, BPE tokenization
Languages: Python, TypeScript, JavaScript, Rust, HTML/CSS; English and Spanish (bilingual)
Tools: FastAPI, React, Cloudflare Workers, SQLite, PyO3, pytest, Playwright, Docker, GitHub Actions, Git

EXPERIENCE

Data & Workflow Specialist | Solvis Corp. | Commerce, CA | 2024–Present
- Validate and integrate multi-source data, automate spreadsheet workflows, and build visualizations for leadership

Heavy Equipment Manager / Logistics Specialist | U.S. Artificial Grass | Los Angeles, CA | 2015–2019
- Managed inventory, freight, and equipment with computer-aided inventory, GPS, and diagnostic tools, incl. a military installation project

IT Specialist / Server Management | Kesem Technology | Washington, DC | 2014–2017
- Maintained server infrastructure for high availability and security compliance; patching, network health monitoring, and OSI-model root-cause troubleshooting

Heavy Equipment Operator, Lance Corporal (E-3) | United States Marine Corps | 2010–2014
- Maintained readiness of equipment, communications gear, and vehicles under strict security protocols

CERTIFICATIONS & EDUCATION

- CompTIA A+ — earned 2014; The Hope Project, Washington, DC.
- Job Readiness & Professional Development | Chrysalis, Los Angeles, CA | 2024
- High School Diploma | James Irwin Charter, Colorado Springs, CO

Volunteer: Hospital Volunteer, Good Samaritan Hospital, Los Angeles, CA (2025)