

Omar Habra

AI Infrastructure & Compiler Engineer · ex-Apple, ex-SiFive

● Open to work · Senior AI infrastructure & compiler roles

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SUMMARY

Senior engineer with production compiler experience at Apple (Swift/Clang) and SiFive (LLVM, RISC-V vectorization). Independent since 2023, building production AI systems on AWS for clients; since 2026, founder of two live AI products, DiffSwarm (AI code review) and RedlineAI (AI contract review for legal teams).

EXPERIENCE

Independent · DiffSwarm, RedlineAI, consulting

2023 – Present

Founder & AI Infrastructure Engineer · San Francisco, CA

- **RedlineAI:** Shipped a macOS app and CLI that reviews NDAs, MSAs, DPAs, vendor agreements and SOWs, keeping only findings tied to the contract text; team plan for legal teams.
- **DiffSwarm:** Shipped a paid PR-review CLI where several AI reviewers work independently and only evidence-backed findings survive; bug-hunt and security modes, CI mode, Homebrew install.
- **AI tutoring platform (client):** Built the retrieval and Claude-on-Bedrock backend, with structured-output validation and regression checks on every curriculum change; infrastructure in Terraform on AWS.
- **Image-generation pipeline (client):** Cut latency and failures with caching and batching, and added an evaluation harness to catch model regressions.

SiFive

2022 – 2023

Senior Software Engineer — LLVM for RISC-V · San Mateo, CA

- Sped up vector workloads on SiFive's RISC-V cores by tuning LLVM vectorization cost models and RVV code generation; added microbenchmarks that caught compiler regressions before they reached customers.
- Integrated LLVM analysis tooling into Freedom Studio IDE and built Python automation for toolchain builds and RISC-V ISA analysis.
- Automated cross-compilation, ISA validation, and performance benchmarking through CI pipelines with Ansible-managed environments.

Apple

2020 – 2022

Software Engineer — Swift/Clang Compiler · Cupertino, CA

- Built Swift-C++ interoperability features in the Swift compiler (shipped in Xcode), including C++ getters/setters imported as Swift properties.
- Supported Apple Silicon compiler work by resolving ABI and backend issues across Swift, Clang, and LLVM for arm64 targets.
- Built cross-architecture CI and log-triage tooling for x86_64/arm64 compiler regressions across Clang, Swift, and LLVM workflows.

PRODUCTS

DiffSwarm diffswarm.com ↗

2026 – Present

AI code review for pull requests, in the terminal and in CI. It runs on the user's own Claude Code or Codex, so code goes only to their own AI provider. Homebrew install; paid plan.

[Rust](#)

[TypeScript](#)

[OpenTUI](#)

[Claude Code](#)

[Codex](#)

[GitHub](#)

Contract review for legal teams on the Mac. Every finding links to the exact clause, and the review runs on the customer's own Claude Code or Codex. Team plan.

Swift

macOS

Rust

Claude Code

Codex

OPEN SOURCE

Tenstorrent TT-Metal

Tenstorrent bounty #30876 ↗

Nov 2025 – Apr 2026

Bounty contributor

Ported MaskFormer Swin-B and DPT-Large to Tenstorrent Wormhole for public bounties; Tenstorrent accepted both as complete (not merged upstream). MaskFormer: 72 ms per image (about 14 FPS) on one N300 with the program cache, down from 1,070 ms at bring-up.

- Bounty #30876 accepted
- Bounty #31290 accepted

Swift Programming Language

Merged Swift PRs ↗

2021 – 2022

Contributor

Contributed merged PRs to the Swift compiler around C++ interoperability, including getter/setter support and pointer type handling.

- PR #40842: Implemented C++ getters/setters interoperability (Merged Mar 2022)
- PR #40276: Fixed pointer type handling in C++ interop (Merged Nov 2021)

SKILLS

Compilers & systems	LLVM, Clang, Swift compiler, RISC-V vector (RVV), Code generation, Vectorization, TT-Metal / TTNN, Performance tuning
Languages	C++, Rust, Python, Swift, TypeScript, Assembly
AI infrastructure	Agent harnesses, Tool use and MCP, Structured outputs, Retrieval (RAG, pgvector), Evaluation harnesses, AWS Bedrock, Claude, OpenAI API
Cloud & data	AWS (ECS, Lambda, Step Functions, S3, RDS), Terraform, Docker, GitHub Actions, Cloudflare Workers, PostgreSQL
Web & product	React, Next.js, Stripe, iOS (ARKit)

BACKGROUND

Education	B.S. Computer Engineering, San José State University (May 2020)
Languages	Arabic (native), English (fluent)
Outside work	Marathon, Olympic triathlon, Brazilian jiu-jitsu