

Paul-Valentin Mini

San Francisco, CA · (415) 694-3616 · paul@emini.com

LinkedIn: [linkedin.com/in/pvmini](https://www.linkedin.com/in/pvmini) · GitHub: github.com/Laptopmini

Senior Software Developer with 10+ years of experience building at a global scale. Expert in React, Next.js, and modern JavaScript ecosystems, with a proven track record of overhauling developer consoles and building robust internal component libraries. Today I work across both halves of that stack: shipping production frontend at scale while applying deep expertise in Applied AI, Prompt Engineering, and LLM integrations to build tools that accelerate developer workflows and bootstrap product integrations. I have a proven track record of leading complex, cross-functional projects from proof-of-concept to zero-break production releases for enterprise platforms like Samsung SmartThings.

TOP SKILLS

<> Frontend & Web

JavaScript, TypeScript, Node.js, React, Next.js, Playwright, Jest, HTML/CSS, ESLint, Biome

💡 AI & Machine Learning

Prompt Engineering, AI Model Orchestration, RAG, Vector Search, Generative UI (AG-UI), LLM Integration (Claude, OpenCode, LM Studio), TDD, Computer Vision (OpenCV, Tesseract)

☁ Infrastructure & DevOps

Docker, Kubernetes, Terraform, GitHub Actions, Jenkins, Spinnaker, JFrog Artifactory (NPM)

📱 Backend & Mobile

Python, Django, Swift, PostgreSQL, Redis, REST API Design, iOS/Android Development

EXPERIENCE

SmartThings, Inc. | San Francisco, CA

Senior Software Developer

January 2020 – June 2026

- **Frontend Architecture & Global Leadership:** Lead developer for the SmartThings Developer Console, unifying UX across multiple web products while partnering with global teams (Poland,

Indonesia, Korea) to integrate cross-functional features.

- **AI Integration & Tooling:** Actively contributed to the company's AI pilot program as a designated power user. Engineered a template repository providing AI-driven prompts and skills to bootstrap product integrations.
- **End-to-End Product Leadership:** Initiated and led the complete refactoring of the platform's onboarding experience, taking proactive ownership to drive the project from proof-of-concept to a successful production release.
- **Developer Experience (DX) Infrastructure:** Streamlined platform development by building a React component library that enforced Samsung's One Design guidelines to unify cross-brand UX, managing zero-break global NPM releases, and maintaining a JavaScript SDK autogenerated from OpenAPI specifications.

Tech Stack: *JavaScript, TypeScript, React, Next.js, Docker, Spinnaker, Kubernetes, Terraform, GitHub Actions, Jenkins, Copilot, Claude, Gemini, Python*

Samsung Research America | San Francisco, CA

Software Developer

March 2018 – January 2020

- **Frontend Transition:** Transitioned to web frontend development for ARTIK Cloud, instrumental in launching the Developer Workspace (a portal for managing SmartThings integrations).
- **SDK Development:** Developed a modern JavaScript SDK and specialized Starter Kits to improve the 3rd-party developer experience.
- **Cross-Platform Maintenance:** Maintained ARTIK Cloud's iOS developer tooling alongside web responsibilities.

Tech Stack: *JavaScript, TypeScript, React, Next.js, Docker, Spinnaker, Kubernetes, Swift, App Store Connect, TestFlight*

Samsung Strategy & Innovation Center | San Francisco, CA

iOS Developer

June 2016 – March 2018

- **Executive Collaboration:** Hired directly under executive leadership (Luc Julia, co-creator of Siri) to serve as the lead iOS developer for ARTIK Cloud.

- **App Engineering:** Conceptualized and engineered the ARTIK Cloud iOS application from the ground up.
- **Universal SDK:** Developed and maintained a Universal Framework (SDK) enabling 3rd-party developers to build natively across iOS, tvOS, watchOS, and macOS.
- **OS Optimization:** Navigated strict Apple OS limitations (background task restrictions, location tracking) to ensure seamless application performance and reliable data syncing.

Tech Stack: *Swift, Objective-C, App Store Connect, TestFlight*

Prism, Inc. | San Francisco, CA

iOS & Backend Developer

October 2015 – May 2016

- **Full-Stack Engineering:** Engineered an iOS application and its supporting backend architecture designed for automated, smart image classification.
- **Computer Vision:** Pioneered a computer vision–driven photo classification system predating native iOS Visual Search, utilizing OpenCV, Tesseract, and Python to identify apps from screenshots and execute Deep Link Lookups.
- **API Architecture:** Designed a highly performant and scalable REST API backed by a PostgreSQL database with Redis caching.

Tech Stack: *Python, Django, PostgreSQL, Redis, SQLite, tesseract-ocr, OpenCV*

Imprivata | Santa Cruz, CA

Android Developer (Capstone Partnership)

January 2015 – August 2015

- **HIPAA-Compliant Mobile App:** Developed an end-to-end encrypted Android application to facilitate secure, confidential document sharing between patients and medical professionals in strict accordance with HIPAA regulations.
- **Data Synchronization:** Architected the data synchronization flow using an internal SQLite database communicating with a Python/MySQL backend.

Tech Stack: *Java, Android Studio, MySQL, SQLite, REST, Python*

PROJECTS

Ralph-node | Personal Project

April 2026

AI Development Pipeline

Built a fully custom, orchestrated AI development pipeline for Node.js from the ground up — no frameworks, no third-party dependencies. The project explores a single thesis: frontier models like Opus 4.7 can be used *efficiently* by routing tasks to the right model for the job, delivering production-quality output at a fraction of the cost.

- **Multi-Model Orchestration:** Designed a routing layer that distributes work across 5 models from 4 providers — Opus 4.7 for planning, DeepSeek V4 Pro for test generation, MiniMax M2.7 for implementation, Opus 4.6 for supervision, and Gemma 4 (local) for summaries.
- **Test-Gated Pipeline:** Every phase is gated behind a test suite and reviewed through automated PR gates. Test generation acts as TDD backpressure — tests are written before implementation, forcing the pipeline to define correct behavior upfront rather than retrofit it.
- **Ralph Loop:** Implementation runs as a tight feedback loop: generate, test, fail, revise — cycling until the suite passes before surfacing output for review.
- **Prompt Architecture:** Engineered role-specific prompts tuned to each model's strengths and cost profile, demonstrating that economics and quality are not mutually exclusive when building AI-native development workflows.

Tech Stack: *Claude, OpenCode, LM Studio, Bash, JavaScript, TypeScript, React, Jest, Playwright, Biome, GitHub Actions*

Ragoût | Personal Project

June 2026

Multimodal RAG Agent

An expert car-mechanic assistant grounded in a specific vehicle's service manuals and technical service bulletins. PDFs are parsed with Docling, diagrams are described by a local vision model, and everything is embedded into a persistent ChromaDB store via LlamaIndex — then served to a browser chat that cites its sources and renders the relevant diagrams inline.

- **Multimodal Ingestion:** Stored each diagram's vision-model description as a text node carrying its image path, making diagrams retrievable by ordinary text queries without multimodal embeddings.

- **Two-Pass Retrieval:** Resolved the vocabulary gap between how users ask ("creaking noise") and how figures are labeled ("exploded view") with a second retrieval pass scoped to the pages the first answer cited.
- **Source Authority & Routing:** Catalogued each document by title, type, and date so newer bulletins supersede older ones and the manual, preventing the agent from averaging conflicting specs. Broad questions route against document summaries first, keeping cost flat as the library grows.
- **Generative UI:** Served a tool-calling agent over AG-UI to a CopilotKit React frontend, running fully offline on local models via LM Studio.

Tech Stack: *Python, LlamaIndex, ChromaDB, Docling, AG-UI, CopilotKit, React, TypeScript, LM Studio*

EDUCATION & CERTIFICATIONS

B.A. Computer Science — University of California, Santa Cruz (UCSC)

Practical Prompt Engineering — Frontend Masters | *Issued Dec 2025*

AI Agents Fundamentals, v2 — Frontend Masters | *Issued Mar 2026*

Spec-Driven Development with Coding Agents — DeepLearning.AI | *Issued May 2026*

Agent Memory: Building Memory-Aware Agents — DeepLearning.AI | *Issued Jun 2026*

Building Agentic RAG with Llamaindex — DeepLearning.AI | *Issued Jun 2026*

Build Interactive Agents with Generative UI — DeepLearning.AI | *Issued Jul 2026*

AWARDS

Living Our Values (L.O.V.) Award — SmartThings | *Received June 2026*

Recognizes individuals who have demonstrated exceptional leadership and commitment to the values of the organization. This award recognizes that this person is a foundational pillar of the team. They are the epitome of dedication, reliability, and consistency. This individual is essential in helping the team build trust in everything we do, serving as the dependable and steady force that consistently takes action and delivers outcomes that matter, keeping the team grounded and moving forward.