/* AI-FIRST / AI-NATIVE */

AI-first / AI-native Engineer

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SUMMARY

AI-native engineer who treats agents as first-class engineering tools across hardware, firmware and software. 18+ years of engineering background (embedded, firmware, Android, backend) combined with an evidence-driven AI workflow: agentic tooling over MCP, prompt engineering, and verification of every AI claim against a dump, a device or a test. Built a QEMU-based emulator for an undocumented SoC by directing an LLM agent that drove Ghidra 12.2, forked two tools to make that loop possible, and ships production LLM features (recommendations, speech, chatbots) in commercial systems.

EXPERIENCE

Total engineering experience — 18+ years.

AI-first / AI-native Engineer 2026 – Present

NDA

- SL6801 Station — AI-first reverse engineering of an undocumented SoC: designed and ran the agent loop (hypothesis → MCP query → decompile/disassemble → patch the emulator → screenshot/test → document evidence) with an LLM agent driving Ghidra 12.2 under my direction; extended the MCP server with 18 endpoints and hardened it with confirmation + evidence rules for destructive operations. Result: ~3,900 functions analysed and a QEMU 8.2 emulator that boots the vendor firmware. Stack: LLM agent + MCP, Ghidra 12.2, QEMU 8.2, Python, Embedded C.
- Telegram assistant bot — event reminders and task tracking via custom function calling from the neural network; Perplexity, Google Gemini and GigaChat LLMs; asyncio, SQLite, Docker.
- Interactive factory machine map — Kotlin Multiplatform Desktop (Compose Multiplatform), multilingual UI, RSA, role-based access.
- Solar Bank Switch and btVolt — AI-assisted firmware and app delivery: ESP32-C3 firmware, BLE, Kotlin/Compose Android app, FastAPI backend, hermetic CAD enclosures.

Engineer-Programmer (AI features in production) Jan 2020 – Dec 2025 (6 years)

PAYCON

- Terminal hardware-software complex: LLM-based recommendations via REST API, speech recognition and synthesis, kiosk Android app (Kotlin, Jetpack Compose), service part with telemetry, auto-updates, AIDL and ESP32 firmware.
- Restaurant ordering app — Kotlin Multiplatform + Swift; supplier chat with photo/video/documents.

SKILLS

AI & LLM

LLM APIs, Prompt Engineering, Function Calling, Tool-calling Agents, MCP, AI-assisted Development, Output Verification, Perplexity, Google Gemini, GigaChat, OpenAI

Agentic Tooling

MCP Servers, Ghidra MCP, Agentic Loops, Automation Scripts, Python, Docker, Git, CLI Tooling

Engineering Foundation

Embedded C, ESP32-C3, ARM Cortex-M, Kotlin, Jetpack Compose, Kotlin Multiplatform, FastAPI, REST API, PostgreSQL, Linux, QEMU, Ghidra

Delivery & Verification

Android & Kiosk Apps, BLE, Speech Synthesis & Recognition, CAD Enclosures, Testing & Verification

CERTIFICATES

2012

MITx 6.002x: Circuits and Electronics

MIT (edX)

Verify ↗ (https://verify.edx.org/cert/317037ee95ed49ebb6142ef20f527706) PDF ↗ (https://veretenenko.ru/anton/mitx-6002x-certificate.pdf)

2014

MITx 6.00.1x: Introduction to Computer Science and Programming Using Python

MIT (edX)

Verify ↗ (https://verify.edx.org/cert/07e1b2377c044bb8aec8b55c19418eb2)

2014

MITx 6.01x: Introduction to EECS I — "Shape the World"

MIT (edX)

Verify

LANGUAGES

Russian — Native, English — B2 (Upper-Intermediate)

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