

Mustafa Asghari

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AI systems-focused software developer building LLM-powered products, tool-using assistants, retrieval workflows, backend APIs, and production-style infrastructure.

Learning software development since mid 2024 and actively shipping projects since late 2024 across AI assistants, source-grounded tutoring, async systems, infrastructure, and system design.

EDUCATION

TAFE Queensland, South Bank

Expected 2026

Diploma of Advanced Programming

- Relevant study: software development, C#, Java, JavaScript, databases, REST APIs, algorithms, object-oriented design, and practical project delivery.

SELECTED PROJECTS

Nexus

Python, OpenAI SDK, Redis, PostgreSQL, ClickHouse, Playwright, gRPC

- Built a local-first macOS AI assistant with structured turn planning, deterministic routing, RAG-backed prompt retrieval, and safety-gated execution across filesystem, browser, code, and HTTP tools.
- Added voice input, wake-word flow, Apple app integrations, and multi-backend memory with graceful fallback to local JSON when infrastructure is unavailable.
- Designed trust-level controls for CLI, Python execution, browser automation, and filesystem access so tool use stays explicit, bounded, and safer.

Kabul Sweets

Next.js, FastAPI, PostgreSQL, Redis, Celery, Stripe, S3

- Built a full-stack commerce platform with storefront, admin dashboard, backend API, background workers, realtime updates, and AI-assisted pricing and media workflows.
- Designed a versioned FastAPI backend covering auth, products, orders, payments, analytics, images, ML, support, Telegram, and realtime routes.
- Integrated async infrastructure with Celery, Redis, Postgres, S3, and Stripe while handling CORS, GZip compression, monitoring, migrations, and operational workflows.

SyntaX API

Python, FastAPI, Redis, Typesense, ClickHouse, Docker

- Built a low-latency social data API with performance-focused backend design, ORJSON responses, health monitoring, and operational pool statistics.
- Implemented TLS-warmed session pooling, token pooling, proxy-aware clients, and layered caching with Redis, Typesense, ClickHouse, request coalescing, and stale-while-revalidate refresh.
- Designed graceful degradation and cache-health probing across live, stale, and cached data paths for resilient production-style behavior.

GrindUp

Next.js, TypeScript, FastAPI, Prisma, PostgreSQL, Redis, ClickHouse, Docker

- Developed an AI-native learning platform with source-grounded tutoring, curriculum generation, quizzes, flashcards, homework, analytics, and coding practice.
- Built a sandboxed FastAPI runner that executes Python, JavaScript, Java, and C++ in Docker, keeping untrusted code isolated from the main application.
- Modeled a large Prisma learning domain for subjects, progress, spaced repetition, contests, submissions, messaging, and social features, while supporting retrieval-grounded AI workflows.

TECHNICAL SKILLS

Languages: Python, TypeScript/JavaScript, SQL, C#, Java, HTML, CSS

Frameworks & Libraries: FastAPI, Next.js, React, Prisma, SQLAlchemy, Celery, OpenAI SDK, Tailwind CSS

Data & Infrastructure: PostgreSQL, Redis, ClickHouse, Typesense, Docker, Alembic, S3-compatible storage, WebSockets, Stripe

Developer Tools: Git, GitHub, GitHub Actions, CI/CD workflows, Docker Compose, Vercel, Railway

AI & LLM Engineering: OpenAI APIs, Claude, Codex, local LLM integration, agent/tool planning, RAG workflows, embeddings, OCR-assisted pipelines, prompt engineering, async AI workflows, system design