HESSAM RASTEGARI

AI Native Engineer

LinkedIn: linkedin.com/in/hessam-rastegari

Email: Hessam.rastegari@gmail.com

Github: github.com/hessamrastegari

Medium: medium.com/@hessamrastegari

Overwatch: overwatch.rastegari.site/site



Professional Summary

AI Native Engineer with 10+ years of software engineering experience, building products with AI agents at the center of the workflow. Designed and built **Overwatch**, an AI-native engineering platform that takes software tasks from intent to a verified release candidate through **specialised agents**, **deterministic orchestration**, independent review, automated testing, and human approval gates.

Brings senior-level engineering discipline — Kotlin and Android architecture, CI/CD, and **99.9% crash-free** production apps — to AI-driven development, shipping faster without giving up reliability.

Core Competencies

- **AI Engineering:** Agent orchestration & workflows, Claude Code, LLM / OpenAI API integration, prompt & context engineering, AI-assisted development, evidence-based verification
- **Full-Stack & Cross-Platform:** PHP Laravel (REST APIs, admin panels), TypeScript / Node.js, React, Flutter, Kotlin Multiplatform, Cordova, Docker
- **Android:** Kotlin, Java, Jetpack Compose, Coroutines, Flow, Room, Retrofit, Hilt, Koin
- **Architecture & Quality:** MVVM, Clean Architecture, Modularization, SOLID, TDD, Profiling & Optimization, Crashlytics, JUnit / Espresso
- **CI/CD & Automation:** GitHub Actions, Jenkins, Gradle Build Optimization, Play Store Deployment, Release Management
- **Leadership & Collaboration:** Code Review & Mentorship, Agile/Scrum, Cross-functional Communication, Technical Documentation

Featured Projects

Overwatch — AI-Native Software Engineering Platform FEATURED

Creator & Solo Engineer — 2026 – Present

- Built a software-engineering control plane that takes a task from intent to a **verified release candidate** through specialised agents for planning, implementation, **independent code review**, testing, behavioural verification, and security analysis.
- Designed a **deterministic orchestrator** that owns workflow state, permissions, budgets, and retries (a persistent **250+ state** task machine), so agents do the reasoning while policy stays predictable and auditable.
- Enforces **"done requires evidence"**: requirements are tied to test output, screenshots, and runtime checks, with bounded repair loops and human approval before release.
- Real-time operations UI with a live **3D visualization** of agents at work, task history, and Google sign-in, self-hosted and shipped phase by phase to production.
- Built test-first: **120k+ lines of code** (TypeScript-first) backed by **2,200+ automated tests**, developed with AI agents as part of its own workflow.

  Stack: TypeScript, Node.js, React, Three.js, Zod, Claude Code, Docker

Vitál — AI Health & Nutrition App
Flutter Developer (one of two engineers) — 2026

- Co-built a premium subscription health & wellness app (nutrition, training, hormone & cycle tracking) for **iOS and Android** from a single Flutter codebase.
- Shipped **AI-powered food tracking** that lets users log and manage what they eat, and built the women's cycle-tracking module end to end.
- Feature-first clean architecture with Riverpod, **3 languages including Arabic (RTL)**, server-driven theming, and dev/staging/prod flavors; mandatory TDD (~40k lines of Dart, 97 test files).
- Delivered at pace with an **AI-assisted development workflow**, using AI agents for implementation, testing, and review.

  Stack: Flutter, Dart, Riverpod, Firebase, REST

AI Call Center — Voice Agent over VoIP
Solo Engineer — 2026

- Built an AI-powered telephone call center on **VoIP** that answers callers in natural spoken language, and engineered it in **three interchangeable architectures** to compare quality, latency, and cost per call minute.
- **Cloud, direct:** ElevenLabs end to end for speech and conversation. **Hybrid:** ElevenLabs voice with the **OpenAI API** as the reasoning layer. **Offline:** fully local speech and language models, with no per-minute vendor cost and no call audio leaving the machine. Benchmarked Persian TTS/STT engines for naturalness, licence, and latency.

  Stack: VoIP / SIP, ElevenLabs, OpenAI API, local STT/TTS/LLM models, Python (FastAPI), React

GatherMap — Cross-Platform Place Discovery App
Creator & Solo Engineer — 2025 – Present

- Designed, built, and operate the whole product alone: a map-first mobile app on **Kotlin Multiplatform + Compose Multiplatform**, one shared codebase for Android and iOS.
- Own the backend as well: a self-hosted **Laravel API and admin panel** on my own VPS (Docker, Cloudflare Tunnel), with CI/CD pipelines and offline-friendly UX.
- Uses AI for on-brand generated visuals and a custom motion system, a real running product rather than a demo.

  Stack: Kotlin Multiplatform, Compose Multiplatform, Laravel, Docker, CI/CD, Maps

Professional Experience

Independent Android Developer (AI-Powered E-Commerce App)
Minishop — Jan 2025 – Present

- Designed and developed an **Android e-commerce application** integrating AI-powered product image generation and intelligent UX flows
- Implemented modern Android architecture using **Kotlin, Jetpack Compose, Hilt, and MVVM**, ensuring modular, maintainable code
- Built a seamless shopping experience with **multi-language support** and **real-time store updates** through RESTful API integration
- Focused on **automation and scalability**, achieving end-to-end deployment with minimal manual intervention

Senior Android & Cross-Platform Developer
Communere Ltd., Remote, Aug 2023 – Jan 2025

- Built the driver companion app solo for **BaseMap EVR, an AI-powered EV fleet-routing platform** used by UK fleet operators: turn-by-turn navigation on AI-optimised routes, delivery proof, and live performance feedback
- Integrated AI-driven backend services into client apps and introduced an **AI-assisted development workflow** (LLM coding assistants for code, tests, and review), speeding up delivery while keeping quality high
- Optimized app startup and UI rendering, achieving **25% faster load times** and **99.9% crash-free sessions** in production
- Delivered **30% faster data synchronization** through improved API usage and caching, and cut delivery time **20%** with Gradle optimizations and GitHub Actions
- Mentored junior developers in Kotlin, Jetpack Compose, and clean architecture, fostering a high-quality code culture

Senior Android Developer
Avinance, Sep 2022 – Jul 2023

- Led an **AI-assisted refactor** of a legacy Java app to Kotlin (MVVM + Coroutines): used LLMs to analyse legacy code, draft Kotlin conversions, and generate unit tests, with every change reviewed by hand, reducing crash rate by **15%**
- Designed and delivered **Android TV and OTT** applications with secure Google DRM and optimized streaming using ExoPlayer

- Increased app performance by **20%** through code profiling, offline caching, and efficient media handling
- Implemented Clean Architecture with Hilt and modularization; mentored junior developers, reducing bug density by **15%**

Senior Android & Full-Stack Developer
Raya Leather Co., Dec 2020 – Aug 2022

- Owned the commerce stack end to end: a **native Android e-commerce app** on custom REST APIs, plus the backend and web presence
- Built the store's **admin panel in PHP Laravel** for managing catalog, orders, and content, and the REST backend that powers the app
- Built an iOS WebView version for cross-platform presence, increasing conversion rate by **20%**
- Raised overall stability by **25%** with JUnit, Espresso, and GitHub CI

Senior Android Developer
Panco.app, Jun 2020 – Nov 2020

- Contributed to the **cross-platform Cordova app** and its native Android layer
- Resolved critical WebRTC connection issues, reducing average connection time from **19s to 2.7s**
- Improved security and performance by refining ProGuard configurations and optimizing network handling

Full-Stack Developer
MCI HUB, Jun 2018 – Feb 2020

- Worked full-stack rather than Android-only: built a **content-provider platform for a university with PHP Laravel**, covering back office and APIs
- Developed and maintained multiple SIM-based Android applications supporting a wide range of telecom services, growing the active user base by **40%**
- Integrated RESTful APIs and managed the full release lifecycle, including Play Store publishing and post-release monitoring

Mid-Level Android Developer
Pulsein, May 2017 – Jun 2018

- Developed two startup Android applications using MVVM and Java, improving performance and maintainability
- Collaborated with designers and backend teams on responsive UI and reliable API integrations

Junior Android Developer
SAMIX, Oct 2014 – May 2017

- Developed and deployed over **100 customized Android applications** for various clients, focusing on UI customization and performance
- Integrated ad services and analytics; supported clients through the full app lifecycle on Google Play

Certifications

- Advance Programming in Kotlin – Meta
- Working with data in Android – Meta
- Version Control – Meta

Education

- Bachelor's Degree in IT-Web Design — University of Applied Science and Technology, Tehran, 2013 – 2015
- Associate's Degree in Software Engineering — Islamic Azad University (Pardis Branch), Tehran, 2009 – 2011

Articles and Journals

- **Reviewer for Conferences and Journals:** Microprocessors and Microsystems: Embedded Hardware Design (MICPRO), Q1, 2021.
- **Published Article:** 15th International Conference on Developments in eSystems Engineering (DeSE): "iCan – Psychological Look in Future Using Augmented Reality Technology".
- **Technical Writer on Medium:** Authored multiple articles on Android architecture, Kotlin best practices, and performance optimization.