Temirlan Dzhoroev

AI engineer with production LLM/RAG systems experience, 3D game engine development background, and HCI research foundation. Builds end-to-end AI pipelines from prototype to production at scale.

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EXPERIENCE

Jul 2024 – Present | **AI Engineer** — Redbrick, Seoul

- Designed and built an end-to-end AI game creation system that takes natural language prompts and produces playable 3D games—covering intent parsing, asset generation, scene composition, and game logic synthesis. This system was the centerpiece of a successful $1.2M government R&D grant.
- Built production RAG pipelines (LangChain, Vercel AI SDK) over 15K+ documents in ChromaDB using hybrid retrieval, query rewriting, and re-ranking—improving answer relevance by ~35% and reducing hallucination rate from 18% to 4%.
- Implemented multi-step agentic workflows (chain-of-thought, ReACT) to orchestrate LLM calls across asset generation, physics configuration, and script authoring—handling up to 8 dependent tool calls per request.
- Designed semantic caching layers (embedding similarity-based lookup), reducing redundant LLM calls by ~40%, cutting inference latency from 3.2s to 0.8s, and saving ~$2K/month in API costs.
- Owned model evaluation and safety: built prompt regression harnesses, implemented output guardrails (content filtering, structured validation), and enforced policy-compliant generation across all production endpoints.

Jul 2023 – Jul 2024 | **3D Frontend Engineer** — Redbrick, Seoul

- Developed and scaled a browser-based 3D game engine (Three.js, WebGL, TypeScript) powering a platform with 54M+ game plays and 10M+ user sign-ups.
- Led codebase modernization of 50K+ lines from Webpack to Vite, upgraded the Three.js rendering pipeline, and replaced the physics engine—reducing build times by ~60%, shrinking production bundles by ~35%, and cutting hot-reload time from 8s to under 1s.
- Refactored the engine into modular, testable packages to unblock parallel development across 3 teams; wrote integration tests covering the scene graph and asset loading paths.
- Redesigned the onboarding flow using session replay analysis and user interviews, increasing 7-day activation by ~25% and Day-30 retention by ~15%.

Feb 2021 – Feb 2023 | **Embedded Systems & HCI Researcher** — DECS Lab, UNIST, Ulsan

- Wrote IoT firmware in C for ARM Cortex-M MCUs powering real-time smart sensor arrays (50+ devices, sub-ms latency requirements).
- Published 6 conference papers, 4 journal articles; co-filed 6 patents. First-author at IEEE RO-MAN 2023, ICROS 2022, HCI Korea 2022. Full list at mastertim.xyz.

EDUCATION

M.S. in Design (Human–Computer Interaction) — UNIST, Feb 2023 | GPA 4.0/4.3
Thesis: *Human perception of social robot face and color expression using computational emotion models*
Lotte Scholarship recipient

B.S. in Computer Science & Industrial Design — UNIST, 2021
Global UNISTAR Silver Scholarship

TECHNICAL SKILLS

Languages: TypeScript, Python, JavaScript, C/C++
AI/LLM: LangChain, LlamaIndex, Vercel AI SDK, ChromaDB, OpenAI API, LLaMA, Anthropic Claude API, embedding models
Frontend & 3D: React, Next.js, Three.js, WebGL, Vite, Node.js
Infrastructure: Docker, AWS, Redis, CI/CD, Git