

Furkan Portakal

Frontend Tech Lead | Applied AI Engineering (LLM Agents, RAG, MCP)

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getporti.com | linkedin.com/in/furkanportakal | github.com/fport | huggingface.co/fport | orcid.org/0009-0002-5405-8657

SUMMARY

Frontend Tech Lead with 6+ years of experience building high-traffic web products (TypeScript, React, Next.js), now focused on applied AI: LLM agents, tool calling, RAG, MCP and fine-tuning. Leads the frontend team at Sanstech (iddaa.com) and helps engineering teams adopt AI in daily delivery. Publishes open-source AI and robotics work on GitHub and Hugging Face.

SKILLS

AI & LLM: LLM applications, AI agents, tool calling, Model Context Protocol (MCP), Retrieval-Augmented Generation (RAG), embeddings, vector search (pgvector, Milvus), LoRA fine-tuning, synthetic data, evaluation, Hugging Face, Vercel AI SDK, Claude Code, LeRobot, SmolVLA, imitation learning

Frontend: TypeScript, JavaScript, React, Next.js (App Router, SSR/ISR), Redux, Redux Saga, React Query, Angular, Tailwind CSS, Storybook, WebSocket, performance optimization, Vitest, Jest, Cypress, Playwright

Backend & Infra: Node.js, Bun, Hono, Nest.js, Python, SQL, PostgreSQL, MongoDB, Drizzle, BullMQ, REST, GraphQL, Docker, Cloudflare Workers, Vercel, GitHub Actions, GitLab CI/CD

Languages: Turkish (Native), English (Intermediate, B1+; comfortable with technical reading and writing)

EXPERIENCE

Sanstech (iddaa.com) — Istanbul, Türkiye (Remote)

Jan 2023 – Present

Frontend Tech Lead

Jul 2026 – Present

- Lead frontend architecture, conventions and code review for iddaa.com web and kiosk products; mentor and unblock teammates.
- Started an internal AI community, gave talks on MCP, RAG, agent skills, plugins and Claude Code, and built an internal marketplace where teams publish and reuse MCP servers, RAG pipelines and agent skill sets.
- Developed most of an AI orchestration platform that coordinates project delivery in the company's AI transformation, including a voice assistant, largely through AI-assisted development.
- Building Jira-based tools for task prioritization and sprint risk, with a tool-calling AI assistant using pgvector retrieval.

Senior Frontend Developer

Jan 2024 – Jul 2026

- Led the JavaScript-to-TypeScript migration of a large production codebase, the move from Styled Components to Tailwind CSS and the upgrade to Next.js 14.
- Designed and built an end-to-end internal product, owning frontend, backend, DevOps and the LLM layer.
- Led the from-scratch rebuild of iddaa kiosk apps; optimized SSR/ISR and virtualization for real-time odds screens.

Frontend Developer

Jan 2023 – Jan 2024

- Built iddaa.com features (React, Next.js, Angular, Redux Saga) and WebSocket-based real-time odds; led refactoring work.

Pargali Bilişim — Software Developer, Antalya

Aug 2022 – Jan 2023

- Built hospitality and tourism cloud apps with Next.js and Nest.js (BFF, PWA); set up GitLab CI/CD; created the in-house UI kit.

Simpra (Protel) — Frontend Developer, Istanbul

Mar 2021 – Jul 2022

- Built restaurant management interfaces (Check, Place) with React, Redux, SCSS and Storybook; built shared UI components.

Mythology Tech — Software Developer, Bursa

Aug 2019 – Feb 2020

- Built the company's first stock management application with React, Redux, Node.js and MongoDB, replacing a manual process.

AI & ROBOTICS PROJECTS

- **porti-code:** Open-source coding agent built from scratch (agent loop, tool calling). github.com/fport/porti-code
- **Issue Writer (TR/EN):** Generated a 26k-row bilingual synthetic dataset and LoRA fine-tuned Gemma 4 to turn Slack messages and bug reports into structured issues; released LoRA and GGUF models with a Hugging Face Space demo.
- **SO-101 Tic-Tac-Toe:** Assembled SO-101 leader/follower arms, recorded a 46-episode teleoperation dataset and trained a SmolVLA policy with LeRobot to play tic-tac-toe.
- **Also on Hugging Face:** Turkish Gemma 3 4B LoRA fine-tune; Süper Lig fantasy points model (102k rows) with a lineup Space.

RESEARCH & EDUCATION

TÜBİTAK 2209-B Research Fellow — Industry-Oriented Undergraduate Research Program

Mar 2021 – Jan 2022

- Own proposal: generating original textile patterns from text descriptions with Bursalı Tekstil; led to a patent application.

Bursa Technical University — B.Sc. in Computer Engineering

GPA 3.20 / 4.00

TALKS & COMMUNITY

- **Talks:** "Unlocking AI with Next.js" (Istanbul JavaScript Community); Frontendship live session on open source.
- **Community:** Co-founder of Kodizim tech community (2021 – 2023); mentor at Frontendship and Find-Mentor.