

Ahmet Kutay Ural

Software Engineer — Applied AI

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SUMMARY

Software Engineer with 5+ years of professional experience, including 3+ years focused on backend and financial infrastructure systems using Python and FastAPI. Designed and developed payment gateways, fiat-crypto exchanges, fraud detection platforms, e-wallet applications, and mission-critical transaction systems processing over £1B annually.

Previously worked on enterprise CRM and communication platforms, developing backend services and custom features for banking and telecommunications clients across 100+ countries using Java.

Alongside fintech and backend engineering, actively building Applied AI systems, including conversational AI, agentic workflows, RAG pipelines, and real-time LLM applications using OpenAI APIs and LangGraph.

Holds an MSc in Data Science and a BSc in Computer Engineering.

EXPERIENCE

Financial House Ltd

Software Engineer

London, UK (Hybrid)

Mar 2023 – Present

- Built and maintained white-label SaaS fintech products including crypto/fiat exchange platforms, mobile e-wallet applications, fraud prevention systems, and bank transfer infrastructures.
- Developed backend services and real-time APIs for hosted checkout systems, merchant/admin operational panels, KYC onboarding workflows, and financial transaction platforms using Python, FastAPI, REST, and WebSocket architectures.
- Implemented real-time transaction lifecycle workflows including PSP integrations, payment processing, IPN handling, crypto operations, settlement pipelines, and merchant risk management flows.
- Contributed to the migration of a legacy Kotlin-based fraud detection system to FastAPI, improving maintainability and enabling faster iteration on merchant-specific fraud prevention rules.
- Contributed to high-reliability financial systems processing annual transaction volumes exceeding £1B, with strong focus on operational stability, transaction integrity, and zero-downtime operations.
- Reduced response times and database load through SQL query optimisation, Redis-based caching strategies, batch-processing workflows, and backend performance improvements across multiple production fintech systems.
- Built an automated forecasting pipeline using Facebook Prophet to predict daily bank deposit volumes from historical transaction data, supporting operational planning and data-driven business insights.

EVAM

Software Engineer

Istanbul, Turkey (Remote)

Jan 2022 – Sep 2022

- Developed backend services and customer-specific enterprise workflows for a SaaS CRM and customer engagement platform used by banking and telecommunications clients across 100+ countries.
- Built custom backend features for real-time SMS, email, and push notification campaigns, enabling enterprise clients to automate customer communication flows without additional product-level changes.
- Worked on high-volume event processing systems using Java, Spring Boot, Kafka, Redis, Elasticsearch, PostgreSQL, and AWS.
- Implemented client-specific integrations, business rules, and performance improvements for enterprise communication workflows and campaign execution pipelines.
- Supported enterprise customers by helping configure, troubleshoot, and extend product functionality for client-specific CRM and campaign management use cases.

Han Group

Backend Engineer (Contract)

Turkey (Remote)

Jan 2021 – Jan 2022

- Developed backend systems for an HRTech platform enabling online recruitment, workforce management, and integrated financial operations for part-time employment workflows across web and mobile applications.
- Built Python/FastAPI services supporting job postings, candidate applications, employer workflows, in-platform messaging, onboarding processes, and operational management systems.
- Implemented payment and wallet infrastructures allowing employers to fund job contracts, hold balances within the platform, and process payout workflows for workers.
- Developed backend APIs and integrations powering mobile applications, admin panels, employer dashboards, promotional listing systems, and operational platform tooling.
- Contributed to scalable cloud-based platform infrastructure using FastAPI, PostgreSQL, Redis, Docker, and AWS services.

Freelance

Turkey (Remote)

Software Developer

2020 – 2021

- Worked on freelance software projects while studying Computer Engineering, developing backend services, mobile applications, and full-stack systems.
- Contributed to the development of a group-buying e-commerce platform focused on collective purchasing power and social commerce workflows.
- Built hands-on experience in API development, database design, mobile-first product development, and cloud-based deployment workflows.
- Developed mobile applications using Flutter and Dart, while providing technical tutoring and freelance software development services.

TECHNICAL SKILLS

Languages: Python, Java, C/C++

Backend Technologies: FastAPI, Flask, Django, Spring Boot, REST APIs, WebSocket, Async Python, SSE Streaming

AI / Applied AI: OpenAI API, LangGraph, MCP, RAG, Qdrant, Vector Search, Prompt Engineering, Streaming AI Systems

Frontend: React, Next.js

Databases & Messaging: PostgreSQL, MySQL, MongoDB, Redis, Kafka

Cloud & Infrastructure: AWS, Docker, Kubernetes, ArgoCD, Cloudflare, GitHub Actions, Linux, Render, Railway

AWS Services: S3, SQS, CloudWatch

Developer Tools: Git, Bitbucket, Jira, Postman, VS Code, PyCharm, JetBrains Tools

Embedded / Research Exposure: CAN Bus, OBD-II, Cohda Wireless OBU, V2V Communication

PROJECTS

AI Smart CV / Digital Twin (Live Demo) | *FastAPI, LangGraph, OpenAI, Next.js, Qdrant*

2026

- Built an AI-powered digital twin capable of answering recruiter questions about experience, technical background, projects, and role fit, and visa/work eligibility requirements through conversational interactions.
- Developed streaming AI workflows using FastAPI, LangGraph, OpenAI APIs, SSE streaming, contextual memory management, and retrieval-augmented generation (RAG) pipelines.
- Implemented AI-driven meeting scheduling workflows with calendar integrations, natural language slot extraction, conversation state management, and real-time streaming responses.
- Designed full-stack architecture including Next.js frontend, vector search infrastructure, backend orchestration layers, and production-oriented AI application workflows.

APIException (GitHub) | *Python, FastAPI, Open Source*

2025 – Present

- Created and maintained **APIException**, an open-source exception handling library for FastAPI focused on standardised API error management and production-ready backend workflows.
- Reached 60K+ downloads and 250+ GitHub stars, becoming one of the widely adopted exception handling libraries within the FastAPI ecosystem.
- Recognised by the Python and FastAPI community after being featured in *Python Weekly* among notable Python libraries of August 2025, highlighted by *Tryolabs* as a suggested Python library of 2025, and indexed by *Context7* for AI-assisted developer tooling.
- Designed reusable abstractions for structured error handling, validation management, and production-oriented backend development workflows.

EDUCATION

Middlesex University London

MSc Data Science

London, United Kingdom

2022 – 2023

Middle East Technical University

BSc Computer Engineering

Ankara, Turkey

2014 – 2021

ADDITIONAL INFORMATION

- Interested in AI infrastructure, LLM systems, autonomous agents, and startup-focused product engineering.
- Open to Backend Engineer, Applied AI Engineer, Founding Engineer, and Full-Stack AI roles.
- Recruiters and technical interviewers are encouraged to visit kutayural.com for a more detailed overview of my background, projects, and technical experience through an AI-powered digital twin capable of answering conversational questions beyond the scope of this CV.