

Malika Umurzakova

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SUMMARY

Software Engineer with strong backend experience and hands-on work with LLM APIs. Experienced in building production systems, integrating external APIs, and designing AI-assisted workflows. Currently focused on prompt engineering, multi-step reasoning, and RAG-based solutions for reliable and structured LLM outputs.

TECHNICAL SKILLS

- Python, Ruby
- Prompt Engineering (multi-step reasoning, structured outputs)
- OpenAI API
- RAG fundamentals (document chunking, retrieval, embeddings)
- API & async backend systems
- PostgreSQL, AWS, Git

PROJECTS

LLM Document Analysis Assistant

- Designed prompt pipelines for extracting structured data from business documents using multi-step reasoning.
- Implemented a RAG workflow with document chunking, retrieval, and structured JSON outputs.
- Built a Python-based service integrating OpenAI API with validation and fallback strategies.

Prompt Evaluation & Safety Playground

- Developed a lightweight framework to evaluate prompt quality across accuracy, stability, and format compliance.
- Designed test cases to detect hallucinations and invalid structured outputs.
- Implemented automated prompt testing using Python and LLM APIs.

PROFESSIONAL EXPERIENCE

		Remote
Independent Software Engineer		<i>September 2024 – Present</i>
<ul style="list-style-type: none">• Developed small technical projects and prototypes, focusing on backend development, APIs, and automation.• Explored AI-assisted workflows and integrations using Python and LLM APIs (prompting, structured outputs).		
Capay Technologies - CT-Tracker Project		Davis, CA, USA (Remote)
Full-Stack Software Engineer		<i>November 2022 – August 2024</i>
<ul style="list-style-type: none">• Built and shipped end-to-end features for a startup platform optimizing construction document workflows under California regulatory constraints.• Designed database schemas and optimized queries to support large document volumes and new product features.• Integrated external APIs, including NOAA weather data and OpenAI API, to automate planning, tagging, and asset description.• Developed background services for document processing and PDF/Excel generation using asynchronous workflows.		

- Delivered production-ready features with full-stack ownership, including testing and deployment.
- **Technologies:** Ruby, Ruby on Rails, JavaScript, PostgreSQL, Redis, Sidekiq, Hotwire, WebSockets, AWS, OpenAI API, NOAA API

TimelySoft - IFC Project

Software Engineer

Bishkek, Kyrgyzstan

June 2020 – June 2021

- Built algorithmic cost-calculation logic for an IFC credit calculator used by microfinance companies to estimate construction budgets.
- Implemented rule-based and mathematical models to compute construction costs based on building geometry, materials, and local regulatory constraints.
- Developed a cross-platform desktop application (Xamarin) enabling users to model houses through constrained components (walls, roofs, windows, materials, etc).
- Optimized and refactored calculation algorithms to improve accuracy, performance, and maintainability.
- Integrated application logic with backend APIs and contributed to maintaining a legacy WinForms system.
- **Technologies:** C#, .NET, ASP.NET, Xamarin, Windows Forms, Microsoft SQL Server, Azure DevOps

EDUCATION

Kyrgyz-Turkish Manas University

BSc in Computer Science

Bishkek, Kyrgyzstan

September 2018 – July 2022

Honors: Cum Laude (GPA: 3.62/4.0)

Activities: ICPC Competitions, Hackathons

- Strong foundation in algorithms and problem solving through ICPC competitions
- Conducted research on face recognition using 3D modeling techniques, focusing on structured data representation and analysis

LANGUAGES

Russian (C1), English (C1), Turkish (C1), Kyrgyz (C1)