Assylbek Saduakhassov

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Experience

AI & Software Engineer

May 2025 – Present

ProfSidekick

Abu Dhabi, UAE

- Built ProfSidekick, a full-stack AI teaching assistant platform that transforms static presentations into voice-interactive lessons with real-time AI tutoring and slide control.
- Engineered scalable backend (FastAPI, PostgreSQL, Redis) with 25+ REST APIs, 6+ database models, deployed via Docker/Fly.io.
- Integrated OpenAI Realtime, Vision, and Function Calling APIs, enabling live voice Q&A, automated slide explanations, and AI-driven slide navigation.
- Implemented real-time communication via WebRTC and custom event streaming, enabling live voice processing, AI guidance, and session syncing across users.

AI & Software Engineer

Apr. 2025 – Present

CTOgram

Almaty, Kazakhstan

- Engineered an LLM-powered assistant, CTOgram, for mobile and Telegram, streamlining car service and part requests; achieved a user satisfaction score of 4.8 out of 5 based on post-interaction surveys.
- Developed FastMCP, a custom Remote Model Context Protocol (MCP) server integrated with the Responses API, enabling real-time tool execution and structured multi-turn conversations.
- Improved UX with dynamic UI elements (buttons, keyboards) based on MCP outputs, e.g., showing user's cars via phone lookup for instant selection.
- Integrated PostgreSQL with Redis caching layer, resulting in a 30% reduction in database query times; streamlined data access for 4 core services utilized by 5+ engineers across the organization.

Software Engineer

Apr. 2024 - Mar. 2025

Qlub Dubai, UAE

- Led integration for Pizza Express and 20+ restaurants across 4 regions, enabling 50K+ monthly transactions via Python microservices, REST APIs, MSSQL, and Redis.
- Delivered integrations for 5+ global POS providers, shortening onboarding timelines by 40%, by standardizing API development, architecture design, and effective stakeholder collaboration.
- Implemented LLM-based categorization system, achieving 94%+ accuracy in automated item classification, improving restaurant analytics and operational insights.
- Improved system reliability and decreased troubleshooting time by 40% by implementing distributed tracing (Jaeger) and real-time monitoring dashboards (Grafana).
- Developed and deployed QR-based menu ordering system for a key POS provider, increasing ordering efficiency by 25% and enhancing customer experience through seamless integration.

Research Assistant

Apr. 2023 - Apr. 2024

NYUAD Laboratory for Computer-Human Intelligence

Abu Dhabi, UAE

- Developed a Chrome extension using JavaScript and Chrome Extensions API, capturing and analyzing over 2M+ user events in real-time, enabling detailed insights into user productivity and distraction patterns.
- Developed a secure backend system in Flask, handling real-time event collection via RESTful APIs and JWT authentication, reducing data transmission vulnerabilities and achieving 99.9% reliability.
- Optimized PostgreSQL database performance, decreasing query response times by 40% through effective indexing and partitioning, enabling efficient real-time data analysis.
- Deployed a scalable Flask application on AWS using EC2, Elastic Load Balancing, Auto Scaling

EDUCATION

New York University Abu Dhabi

Abu Dhabi, UAE

B.S. of Computer Science, Minor in Applied Mathematics; GPA: 3.77

Aug. 2021 - May 2025

• Relevant Courses: Software Engineering, Linear Algebra, Probability and Statistics, Differential Equations, Algorithms, Data Structures, Machine Learning, Reinforcement Learning, Operating Systems, Computer Networks

Founding Engineer

Sep. 2023 – May 2024

Clout

- Co-founded and led development of Clout, a dynamic influencer media-kit platform featuring personalized URLs, integrated with Instagram, TikTok, and YouTube, automating daily updates of performance metrics.
- Built scalable backend using Django REST, AWS (EC2, S3, RDS PostgreSQL), and JWT, supporting seamless data collection from social media APIs, achieving 99.9% uptime and enabling real-time analytics.
- Acquired 50+ influencers within two months, streamlining brand collaboration by automating media-kit creation, which reduced manual effort by 85% compared to traditional methods (e.g., Canva, manual screenshots)

TECHNICAL SKILLS

Python, Django, FastAPI, RESTful APIs, JWT, API Rate Limiting, PostgreSQL, MySQL, MSSQL, Redis, OpenAI APIs (GPT-4, Realtime, Vision, Function Calling), LangChain, LLMs, Docker, AWS (EC2, S3, RDS, Elastic Beanstalk), GitHub Actions, Nginx, CI/CD, Grafana, Jaeger Tracing, Unit Testing, Integration Testing, pytest, Postman, Git, GitHub, Jira, Confluence