

Kyrylo K.

Middle AI/ML Engineer Back-End Developer

SUMMARY

- AI/ML Engineer and Backend Developer with 4 years of experience in designing RAG-based chatbots, AI agents, and automated workflows using Python, FastAPI, Flask, and SQL/NoSQL databases.
- Expertise in integrating LLMs (GPT, Claude, LLaMa) with vector search technologies (Pinecone, ChromaDB) and enterprise tools like Salesforce and Google Workspace for real-time communication and lead generation.
- Proficient in software architecture design, prompt engineering, and building scalable AI systems with robust error handling and workflow automation using n8n and Zapier.

TECHNICAL SKILLS

Main Technical Skills	Python (4 yr.), FastAPI (2 yr.), Flask, SQL (2 yr.), NoSQL (2 yr.)
Programming Languages	JavaScript, Python (4 yr.)
Python Libraries and Tools	Alembic, Beautiful Soup (1 yr.), Matplotlib, NLTK, NumPy, Pillow, Plotly, pytest (1 yr.), Scikit-learn, Streamlit (1 yr.), TensorFlow
AI & Machine Learning	ElevenLabs (1 yr.), LangChain (2 yr.), LangGraph, NumPy, OpenAI (2 yr.), OpenCV, PandasAI, Pinecone, Scikit-learn, TensorFlow, Whisper (1 yr.)
Python Frameworks	FastAPI (2 yr.), Flask
Salesforce Ecosystem	Google Ads (1 yr.), Salesforce
Social Media Marketing	Google Ads (1 yr.)
JavaScript Frameworks	React
Data Analysis and Visualization Technologies	Jupyter Notebook, PandasAI
Databases & Management Systems / ORM	Airtable, AWS DynamoDB (1 yr.), ChromaDB, MongoDB, NoSQL (2 yr.), PostgreSQL (1 yr.), Redis (1 yr.), SQL (2 yr.), SQLAlchemy (1 yr.), Supabase
Cloud Platforms, Services & Computing	AWS (1 yr.), GCP
Amazon Web Services	AWS DynamoDB (1 yr.), AWS WorkSpaces
Industry Domain Experience	e-commerce (1 yr.)

Web/App Servers, Middleware	Apache HTTP Server
SDK / API and Integrations	API, FastAPI (2 yr.), JWT (1 yr.), YouTube API
Virtualization, Containers and Orchestration	Docker (1 yr.)
Version Control	Git, Github Actions
Deployment, CI/CD & Administration	GitLab CI
Mail / Network Protocols / Data transfer	JWT (1 yr.), WebSockets
Third Party Tools / IDEs / SDK / Services	Outlook, PyCharm, Visual Studio
QA, Test Automation, Security	Postman, pytest (1 yr.), Selenium (1 yr.)
Platforms	Salesforce
Other Technical Skills	Groq

WORK EXPERIENCE

AI & ML Engineer | Back-End Developer (n8n Automations & Agents)

Duration: 0.5 years

Summary:

- An n8n AI-powered chatbot developed as an internal company tool for lead generation and customer engagement
- The system enables automated communication with potential clients through WhatsApp, captures and qualifies leads, and synchronizes data with CRM systems
- The architecture is built around Retrieval-Augmented Generation (RAG) for knowledge-based responses and n8n agentic workflows that orchestrate AI interactions, automation pipelines, and integrations with enterprise tools such as Salesforce and Google Workspace

Responsibilities:

- Designed chat logic and conversational flow for an AI-powered chatbot.
- Developed automated workflows in n8n to orchestrate AI conversations, data enrichment, and CRM-related processes.
- Built an AI agent with access to multiple tools, including checking available time slots, booking appointments, and saving leads to Salesforce.
- Implemented WhatsApp integration to enable real-time conversations with potential clients and automated lead capture.
- Designed a RAG architecture using Pinecone vector search to retrieve relevant company information and deliver context-aware responses.
- Integrated Salesforce CRM with n8n workflows to automatically create leads, update customer records, and trigger sales processes.



- Configured Supabase as a persistent memory and user data store to maintain conversation context across sessions.
- Applied prompt engineering strategies to guide LLM behavior for structured outputs, lead qualification, and reliable tool usage.
- Built error handling workflows in n8n to ensure system reliability and graceful failure recovery.

Technologies: Python, JavaScript, n8n, Supabase, Streamlit, GPT, Pinecone, Airtable, Salesforce, Google Workspace (Gmail, Google Drive, Google Calendar), Microsoft Outlook & Calendar, WhatsApp, Prompt Engineering & Evaluation (Promptfoo, LangSmith)

AI/ML Engineer | Backend Developer (AI-Driven Discord Bot)

Duration: 0.5 years

Summary:

- An automated moderation system for Discord designed to facilitate structured debates on various topics
- The project features complex multi-user interaction flows, real-time voice message processing (Speech-to-Text), and an automated judging/moderation engine that ensures compliance with debate rules and etiquette

Responsibilities:

- Designed and implemented backend services for a Discord bot supporting structured multi-user debates and automated moderation.
- Developed streaming TTS, STT, and TTT functionality.
- Built an agentic workflow with custom tool integrations, including automated moderation and dynamic topic management.
- Developed logic for post-session analytics generation, including conversation summaries, debate scoring, sub-topic detection, per-user activity reports, and conversation tips.
- Developed NLP-based components for detecting rule violations, offensive language, and off-topic responses.
- Optimized inference pipelines for low-latency responses during live debate sessions.

Technologies: Python, PostgreSQL, LangChain / LangSmith, groq, ElevenLabs, Whisper, DiscordAPI, WebSockets, OpenAI Realtime API

AI & ML Engineer | Back-End Developer (Mental health chatbot)

Duration: 0.5 years

Summary:

- Chatbot designed to help people with their mental problems
- It consists of a well-trained LLM model that is secure
- The bot can interact with users verbally and by text messages in real time, has memory of previous conversations, simulates natural conversation, and offers guided therapeutic exercises

Responsibilities:

- Performed back-end development.
- Conducted prompt engineering.
- Developed scripts.
- Scraped and processed documents.
- Developed streaming TTS, STT, and TTT functionality.



- Attached memory to the LLM.
- Developed a simple front-end for the chatbot.

Technologies: Python, FastAPI, React, PostgreSQL, Docker, LangChain / LangSmith, LLaMa, Whisper, ElevenLabs, AWS Bedrock, AWS SageMaker, Selenium, BeautifulSoup (bs4), AssemblyAI API, pyannote, YouTubeAPI

AI/ML Engineer | Prompt Engineer (Website generator)

Duration: 1 year

Summary:

- A service that automates the creation of SEO-optimized websites featuring a large number of interconnected pages
- Each website follows a tree-like structure, where pages on a specific topic link to more detailed pages within the same theme

Responsibilities:

- Structured page elements.
- Conducted prompt engineering (Few-Shot, Tree-of-Thought, Self-Consistency, Chain-of-Thought).
- Generated media content.
- Performed keyword research.
- Generated tree structures for website organization.
- Conducted content humanization research.
- Performed unit testing.
- Scraped websites for data and content.

Technologies: FastAPI, SQLAlchemy, LangChain / LangSmith, Instructor, treelib, OpenAI API, DALL-E, HeyGen, ElevenLabs, Google Ads API

AI/ML Engineer | Back-End Developer (Data Analytics Chatbot)

Duration: 0.5 years

Summary:

- A chatbot designed to leverage LLMs for language understanding, analytical understanding, logical reasoning, and analytical computations
- It works with various dataset formats, generates and executes SQL/Python code based on user requests, solves logic reasoning tasks, visualizes data, and recommends visualizations for user-specific needs

Responsibilities:

- Performed back-end development.
- Trained and developed ML tools for the chatbot.
- Conducted prompt engineering.
- Used LLMs (Claude 3.5 and GPT-4/4o) to analyze and orchestrate chatbot agent behavior.
- Created analytical and mathematical tools to extend LLM capabilities.
- Integrated various APIs.
- Implemented and maintained a scalable and robust infrastructure using AWS/GCP.
- Ensured high levels of security and data protection.
- Developed and maintained API documentation.
- Implemented new features.
- Participated in UI development.



- Conducted code reviews.

Technologies: Python, pandas, PostgreSQL, LangChain, transformers, LIDA, PAL, matplotlib / Plotly / ggplot, Streamlit, OpenAI API (GPT-3.5/4/4o), Anthropic API (Claude 3.5), AWS (DynamoDB, EC2), GCP

NLP Engineer | Back-End Developer (Sales bot)

Duration: 1 year

Summary:

- A software tool that uses a filter system to select applications that do not need to be processed by sales managers
- The system uses criteria such as customer interests, geographic location, technical skills, and other factors to accurately select potential customers

Responsibilities:

- Created models for content generation.
- Utilized Selenium for search automation.
- Performed unit testing.
- Built microservices.
- Designed database architecture.
- Improved the matching system.

Technologies: Python, FastAPI, Selenium, BeautifulSoup, langdetect, Redis, DynamoDB, JWT, Pytest, Docker, AWS (S3, EC2, CDK), Chrome, OpenAI ChatGPT

EDUCATION

- **Bachelor's degree in computer linguistics**
Taras Shevchenko National University of Kyiv

CERTIFICATION

- **DeepLearning.AI TensorFlow Developer**
Coursera | DeepLearning.AI
- **NLP – Natural Language Processing with Python**
Udemy
- **Multi-Agent Systems with LangGraph**
Datacamp
- **Analyze Speech and Language with Google APIs Skill Badge**
Google Cloud
- **Using the Google Cloud Speech API**
Google Cloud

