Lev
Middle Machine Learning Engineer

SUMMARY

- 4 years of experience designing and deploying ML solutions in NLP, computer vision, speech, and signal processing domains using Python, PyTorch, TensorFlow, and HuggingFace.
- Expertise in building scalable ML pipelines, including real-time TTS systems, RAG-based legal assistants, and time series forecasting with XGBoost and Prophet.
- Proficient in data engineering, feature extraction, and hyperparameter tuning with tools like Optuna and MLflow for model lifecycle management.
- Hands-on experience with cloud platforms (AWS, GCP), containerization (Docker), and experiment tracking to ensure reproducible, production-ready deployments.
- Master's degree in Computer Science from Kyiv School of Economics, with strong foundations in algorithms, data processing (Pandas, PySpark), and software engineering best practices.

TECHNICAL SKILLS

Main Technical Skills	Python (4 yr.), NLP (4 yr.), GCE
AI Tools & Assistants	Gemini, Grok
Programming Languages	Python (4 yr.)
AI & Machine Learning	Amazon Machine learning services, Faiss (1 yr.), Grok, Hugging Face (2 yr.), Keras, LangChain (1 yr.), Mlflow (1 yr.), NLP (4 yr.), NumPy (4 yr.), OpenAI (1 yr.), Optuna (1 yr.), PandasAI (4 yr.), PyTorch (3 yr.), Scikit-learn (4 yr.), Spacy, TensorFlow, Transformer, Xgboost (2 yr.)
JavaScript Libraries and Tools	Electron (1 yr.), p5.js (1 yr.)
Python Libraries and Tools	Gensim, Keras, Matplotlib, NLTK, NumPy (4 yr.), Plotly (1 yr.), PySpark, PyTorch (3 yr.), Scikit-learn (4 yr.), SciPy (4 yr.), Seaborn, TensorFlow
Data Analysis and Visualization Technologies	LightGBM, PandasAI (4 yr.), Prophet (1 yr.)
Databases & Management Systems / ORM	MySQL (4 yr.), Oracle Database, PostgreSQL, SQL
Cloud Platforms, Services & Computing	AWS (3 yr.), GCP
Amazon Web Services	AWS Boto3, botocore

Google Cloud Platform	GCE
Deployment, CI/CD & Administration	CD DevOps pipelines (1 yr.), Flux
Virtualization, Containers and Orchestration	Docker (2 yr.)
Version Control	Git (3 yr.)
Operating Systems	GNU (1 yr.), Linux (3 yr.)
Other Technical Skills	CNNs (1 yr.), FFT (1 yr.), LLMs (1 yr.), TTS (1 yr.)

WORK EXPERIENCE

ML Engineer (Energy and Charging Platforms AI Integration)

Duration: 1 year

Summary:

- The project focuses on integrating advanced AI capabilities into energy and charging platforms to enable accurate forecasting and intelligent optimization
- It includes predictive models for solar generation, EV charging demand, load behavior, electricity pricing, and battery storage management

Responsibilities:

- Developed and maintained time series forecasting models using statistical Prophet and machine learning approaches including XGBoost.
- Performed feature engineering and data preprocessing to improve forecast accuracy and stability.
- Conducted hyperparameter optimization using Optuna to systematically improve model performance.
- Designed and implemented an MLflow-based experiment tracking setup to manage model versions, parameters, and evaluation metrics.
- Prepared, cleaned, and structured data for modeling and analytics.

Technologies: Python, Pandas, NumPy, SciPy, Scikit-learn, XGBoost, PyTorch, MySQL, AWS, Plotly, Docker

ML Engineer (Jamming System for UAVs)

Duration: 1 year

Summary:

- Developed an anti-jamming system for UAVs focused on detecting and classifying radio-frequency jamming on the communication channel
- The solution combines software-defined radio signal processing with deep learning-based classification

Responsibilities:

- Designed and implemented radio signal modulation and processing pipelines using GNU Radio.

- Simulated and generated jammed and non-jammed RF signals for training and evaluation.
- Built and trained CNN-based models to detect and classify jamming patterns in radio channels.
- Performed signal preprocessing and feature extraction to convert RF data into model-ready representations.

Technologies: Python, GNU Radio, CNNs, RF signal processing, FFT, Spectrograms, NumPy, SciPy, Linux, Git

ML Engineer (Protego AI Call Assistant)

Duration: 1 year

Summary:

- Developing a real-time AI phone call assistant designed to handle live voice interactions with users
- The system processes incoming audio streams, generates context-aware responses, and converts them into natural-sounding speech in real time

Responsibilities:

- Designed and implemented a real-time Text-to-Speech (TTS) module for live phone call interactions.
- Explored, evaluated, and benchmarked multiple TTS and speech-related models to select optimal solutions for latency and audio quality.
- Performed model fine-tuning to improve voice naturalness, pronunciation, and response timing.
- Built and containerized services using Docker, ensuring reproducible and scalable deployments.
- Deployed and managed TTS services on RunPod cloud infrastructure.

Technologies: Python, PyTorch, Text-to-Speech (TTS), real-time audio processing, Docker, RunPod, Linux, Git

ML Engineer (Legal Assistant Powered by RAG System)

Duration: 1 year

Summary:

- Legal assistant powered by a Retrieval-Augmented Generation (RAG) system for US constitutional and federal law
- Enabled users to ask complex legal questions and receive accurate, citation-based responses grounded in the US
- Constitution, federal law, and New York State regulations

Responsibilities:

- Parsed and embedded legal documents (U.S. Constitution, federal, and NY state laws) using advanced text embedding models from HuggingFace.
- Built a conversational interface that allows users to naturally query legal texts.
- Implemented agent-based intelligent query reformulation to match user intent with optimal legal passages.
- Ensured answer trustworthiness by grounding outputs in retrieved legal content and providing traceable citations.

- Evaluated multiple embedding and retrieval strategies to boost accuracy and reliability in legal queries.

Technologies: Python, HuggingFace, Langchain, OpenAI, AWS, RAG

EDUCATION

- **Kyiv School of Economics**
  Masters of Computer Science
- **Lev Bachelor of Programs Engineering**