

# Oleksiy S.

## Senior AI/ML and Infrastructure Engineer

### SUMMARY

- 10+ years in AI/ML & Data Science, high-performance systems, 10+ years in DevOps and 5+ years in MLOps;
- Expertise in Python, Asyncio, Aiohttp, Redis, PostgreSQL, Neo4j, ElasticSearch, and cloud platforms (AWS, GCP, Azure);
- Experience with high-load environments, Redis queues, custom assemblies, and data isolation in production-ready systems;
- Skilled in Active Directory integrations, NLP, similarity engines, and AI-driven architectures, with focus on context engineering, summarization, and agentic RAG pipelines (LlamaIndex, Quadrant, IntentRouter);
- Experienced with both text and voice AI models (speaker identification, speech-to-text) and ontology-driven algorithms (PCA, classifiers, semantic understanding from scratch);
- Knowledge of AWS services (S3, EC2, Fargate, EKS, Bedrock pipelines), Kubernetes, CI/CD automation, and cloud migrations (AWS to GCP);
- Passion for NLP, AI, and similarity engines, with preference for applied AI/ML approaches over purely statistical methods;
- Experienced leadership in R&D and engineering management, delivering production-ready AI/ML solutions in defense, search, and semantic platforms.

### TECHNICAL SKILLS

<b>Main Technical Skills</b>	Python
<b>Programming Languages</b>	Python
<b>AI &amp; Machine Learning</b>	AI, BERT, ClearML, CrewAI, GloVe, LangChain, LlamaIndex, LLM, NumPy, PyTorch, RAG, Scikit-learn, Spacy, Xgboost
<b>Python Libraries and Tools</b>	aiohttp, AsyncIO, Dask, Gevent, NLTK, NumPy, pytest, PyTorch, Scikit-learn, Werkzeug
<b>Python Frameworks</b>	Django, Tornado
<b>UI Frameworks, Libraries, and Browsers</b>	Foundation
<b>PHP Libraries and Tools</b>	WebOB
<b>Data Analysis and Visualization Technologies</b>	Apache Airflow, DataFrame library, Polars (pola.rs, DataFrame library)

<b>Security</b>	OpenVas, Tornado
<b>Databases &amp; Management Systems / ORM</b>	AWS ElasticSearch, ELK stack (Elasticsearch, Logstash, Kibana), leveldb, MongoDB, Neo4j, PostgreSQL, Redis
<b>Cloud Platforms, Services &amp; Computing</b>	AWS, GCP, Heroku
<b>Amazon Web Services</b>	AWS ElasticSearch, AWS EMR, AWS MQ
<b>Azure Cloud Services</b>	Hyper-V
<b>Deployment, CI/CD &amp; Administration</b>	ArgoCD, CircleCI, Drone CI, Drone Engineering, Helm, New Relic, Pulumi, Travis CI
<b>Collaboration, Task &amp; Issue Tracking</b>	Atlassian Trello, Favro, IBM Rational ClearCase, Jira, OTRS, Slack
<b>Message/Queue/ Task Brokers</b>	AWS MQ, Celery, Kafka, RabbitMQ
<b>Logging and Monitoring</b>	Cacti, Grafana, Jaeger, Nagios, Prometheus, Sentry, Thanos, Zabbix
<b>Virtualization, Containers and Orchestration</b>	Docker, Kubernetes, Proxmox, VmWare
<b>Operating Systems</b>	FreeNAS
<b>Project Management &amp; Administration</b>	GLPI
<b>File Systems, Storage</b>	min.io
<b>Platforms</b>	monday.com, Quadrant, SAAS
<b>QA, Test Automation, Security</b>	OpenVas, pytest, Unit Testing
<b>Methodologies, Paradigms and Patterns</b>	SOLID
<b>Web/App Servers, Middleware</b>	Tornado
<b>Hosting, Control Panels</b>	uWSGI



## WORK EXPERIENCE

### Head of R&D, NDA (Defense Technologies)

**Duration:** Feb. 2023 - May 2025

**Summary:** Established and led the R&D department focused on developing military technology solutions. Specialized in digital signal processing, ML-based analysis, and computer vision integrated with hardware systems.

#### Key Responsibilities:

- Built and managed the R&D department from the ground up;
- Developed production-ready solutions for signal processing and computer vision;
- Implemented robust data isolation strategies and optimized high-load ML pipelines for real-time analysis;
- Ensured scalability and precision of systems for battlefield deployment.

**Result:** Delivered robust and stable solutions successfully applied in military contexts.

**Technologies:** Machine Learning, Computer Vision, Signal Processing, Python, Hardware Integration.

### Chief Engineering Officer, Ocean.io

**Duration:** Jun. 2016 - Nov. 2022

**Summary:** Directed engineering teams and product development for a global semantic search engine platform. Oversaw AI-driven solutions, technical strategy, and business-aligned engineering.

#### Key Responsibilities:

- Led multiple engineering teams across product lifecycle;
- Defined internal and business requirements;
- Supervised AI development and hands-on system architecture;
- Designed and implemented asynchronous codebases and a semantic web search engine from scratch;
- Built custom high-load assemblies with Redis queues, optimized data isolation, and integrated Active Directory authentication;
- Drove AWS infrastructure adoption and later migration to GCP.

**Result:** Created a unique SaaS product attracting European investment and wide user adoption.

**Technologies:** Python, Asyncio, Aiohttp, Redis, Kafka, PostgreSQL, Elasticsearch, Neo4j, AWS (S3, EC2, Fargate, EKS, ElasticSearch, Bedrock pipelines), GCP migration.

### Core Engineer (Python), YAGA Inc.

**Duration:** Sep. 2015 - May 2016

**Summary:** Contributed to the development of a high-load mobile video messenger.



**Key Responsibilities:**

- Developed core application features under strict deadlines;
- Improved project performance and functionality.

**Result:** Successful release with all essential features in a short timeframe.

**Technologies:** Python, High-load Systems, Messaging Platforms.

**Engineering Team Lead, CloneFish (EvoPlay, Gambling Platform)**

**Duration:** Oct. 2014 - Aug. 2015

**Summary:** Managed development team for a high-load gambling platform, ensuring infrastructure stability and performance.

**Key Responsibilities:**

- Led engineering team and optimized workflows;
- Implemented infrastructure improvements and platform refactoring;
- Balanced team rotation and budget efficiency.

**Result:** Achieved platform stability and delivered a new core engine for company products.

**Technologies:** Python, High-Load Platforms, and Infrastructure Optimization.

**CIO, MacHOUSE / VisionHOUSE (Media Solutions)**

**Duration:** May 2012 - Oct. 2014

**Summary:** Directed IT strategy and infrastructure for a large AV integration and media solutions company.

**Key Responsibilities:**

- Led IT management and developer teams;
- Created development processes and guidelines;
- Oversaw infrastructure and process optimization.

**Result:** Delivered stable infrastructure and integration solutions for TV industry projects.

**Technologies:** IT Strategy, Infrastructure Management, Media Integration.

**Engineering Manager, Bolid Ukraine (Security R&D)**

**Duration:** Aug. 2011 - May 2012

**Summary:** Managed development of scalable security systems with GPS monitoring solutions.

**Key Responsibilities:**

- Oversaw project management and IT strategy;
- Led a small R&D team to develop monitoring systems;
- Applied ontology-driven algorithms (semantic understanding, PCA, classifiers) to enhance monitoring capabilities.

**Result:** Released monitoring system for transport infrastructure.



**Technologies:** GPS Monitoring, Scalable Security Systems, Ontology-based ML.

### **Technical Engineer, Legion Security Engineering**

**Duration:** Jan. 2009 - Jul. 2011

**Summary:** Developed and integrated security systems software for hardware controllers.

#### **Key Responsibilities:**

- Designed and coded software for various security controllers;
- Integrated hardware and system-level solutions.

**Result:** Released the remote radio access controller as a product.

**Technologies:** Embedded Systems, Security Software Development.

### **Integration System Specialist, Makrocap Development (Property Management)**

**Duration:** May 2006 - Nov. 2008

**Summary:** Implemented IT security and ERP integrations for property management solutions.

#### **Key Responsibilities:**

- Integrated ERP, billing, and security systems;
- Supported IT infrastructure optimization.

**Result:** Optimized business processes and deployed secure IT integrations.

**Technologies:** ERP Systems, Billing, Security Integrations.

## **EDUCATION**

- **Engineer and Analyst of Computer Systems**, Specialized Computer Systems, NTU KHPI (2010-2011)
- **Bachelor, Computer Systems and Network Computer Engineering** (2005-2009),

## **HOBBIES**

- Free ride mountain skiing
- Gym, swimming, wakeboarding
- Professional photo
- Classical, electric guitars, digital and vinyl music collecting, djing

