Mykhailo
Senior ML & Data Engineer

SUMMARY

- Machine Learning and Data Engineer with 10+ years of professional experience.
- Knowledge of a wide range of programming languages, technologies and platforms, inc Python, JavaScript, C/C++, MATLAB;
- Extensive experience with designing and academic analysis of AI/ML algorithms, data analytics, mathematical optimization, modern statistical and stochastic models, robotics;
- Determining and analyzing business requirements, communicating with clients and architecting software product;
- Solid experience in engineering and design of robust and efficient software products;
- Track record of performing as a member of large-scale distributed engineering teams;
- Strong knowledge of OOP/OOA/OOD, database modeling;
- Experience with cutting edge Semiconductor Engineering;
- Proficient in writing and presentation of grants, projects reports and documentation;
- Fluent English;
- Upper-Intermediate German and Dutch.

TECHNICAL SKILLS

Main Technical Skills	Python, MatLab, TensorFlow, PyTorch
Programming Languages	C++, JavaScript, Python, SPARQL
.NET Platform	Azure
AI & Machine Learning	Flower, LLM, NLP, OpenMined, PyTorch, TensorFlow
Java Libraries and Tools	JSON
JavaScript Libraries and Tools	JSON-LD
Python Frameworks	Prefect
Python Libraries and Tools	PyTorch, TensorFlow
Data Analysis and Visualization Technologies	Apache Airflow, MapReduce
Security	OPA
Databases & Management Systems / ORM	MongoDB, PostgreSQL, Snowflake, SQL
UI Frameworks, Libraries, and Browsers	XML

Cloud Platforms, Services & Computing	AWS, Azure, GCP
Amazon Web Services	AWS KMS, AWS Step Functions
Scripting and Command Line Interfaces	Bash
Version Control	BitBucket, Github Actions, GitLab
Mail / Network Protocols / Data transfer	HTTP, IP Stack, TCP
Third Party Tools / IDEs / SDK / Services	MatLab
SDK / API and Integrations	Web API
Other Technical Skills	EA, Erwin, Generative AI, knowledge graphs, PDE, Sparx, Wolfram Mathematica, Zero Knowledge, Zero-Trust Metadata

EXPERIENCE

Senior NLP and LLM Engineer, Fraud Detection in Healthcare

02/2019 – 2025

Senior Design Engineer, ASML

02/2019 – 2024

Mathware and Software consultant, Sioux-LIME

06/2017 – 02/2019

Ph.D. Researcher, University of Technology, Delft, Netherlands

06/2012 – 10/2016

PROJECTS

ML researcher, NDA

03/2025 – present

Developing a conceptual ML model for semantic data processing using advanced math and physical modeling

Senior NLP and LLM Engineer, Fraud Detection in Healthcare

02/2019 – 02/2025

Description: The project accelerates the adoption of conversational AI through content, consulting, & community.

- Architecting and developing LLM to process medical records for fraud detection (text-to-text).
- We utilized LLM for diagnoses generation in order to compare them with the actual prescribed ones
- Developed GNN and Isolated Forest model for fraud detection
- NVIDIA Jetson Xavier. Flashing the OS, installing drivers, python environment, and NN for speech translation and communication

Senior Design Engineer and Software Quality Manager, ASML

02/2019 – 2024

- Leading a group for Machine Learning, Artificial Intelligence, and Data Science;
- Working in an Advanced Algorithms and Image Processing Group, my responsibilities include designing Machine Learning Algorithms as well as mathematical, statistical, and physical models for precision measurements in lithographic machines.
- Developing generative AI solutions, autoencoders, and transformers for image to-image-applications (Azure orchestration, TensorFlow/Jax, Python)

Senior Data Engineer

09/2021 – 01/2023

- Designing a product to ingest data via API requests (ETL) and store it in the s3 bucket, transform data, and store it into the snowflake tables (Python, SnowFlake, Airflow, AWS, SQL);
- Automation process of the software development process, scheduling ingestion jobs in AWS.

Consultant for Mathware and Software, AI and ML, Sioux LIME

05/2018 – 02/2019

- Project for KADASTER: Designed a highly efficient model and algorithm that includes AI/ML, complex data analytics, image processing, and delivery of a highly efficient software tool (Python, Tensorflow, Scikit-learn, SQL, PostgreSQL, MongoDB, Docker, Kubernetes);
- Designed algorithms for indoor navigation of a self-driving robot (Python, C++);
- Project for ASML: in close collaboration with a Software and Functional department, I worked on the migration of old code to up-to-date standards, including algorithm optimization, changing model interfaces, testing, and integration into a complex infrastructure (MATLAB).

Ph.D. Project, University of Technology, Delft, Netherlands

06/2012 – 10/2016

- Developed a mathematical model to describe the nonlinear and stochastic behavior of complex dynamical systems;
- Coded Brownian Dynamics and Monte Carlo algorithms for stochastic dynamics (MATLAB);
- Result validation with real data and presentation to industrial partners;
- Managed 3 bachelor projects and supervised problem-solving sessions for about 50 students.

EDUCATION

- **Ph.D., Theoretical Physics**
  06/2012 – 10/2016
  University of Technology, Delft, Netherlands
- **Candidate of Science (Ukrainian Ph.D.), Theoretical Mechanics**
  09/2009 – 05/2012
  National T. Shevchenko University, Ukraine
- **M.Sc., Mathematics and Mechanics (grade point average 5.0/5.0)**
  09/2007 – 08/2009
  National T. Shevchenko University, Ukraine
  Major: Theoretical Mechanics
  Minor: Financial and Actuarial Mathematics
- **B.Sc., Mathematics, and Mechanics (grade 4.63/5.0)**
  09/2003 – 08/2007
  National T. Shevchenko University, Ukraine
- **Art-School Diploma, Art Academy, UA**
  09/1998 – 07/2001
- **Regional Team Member of Physical and Mathematical Olympiads**
  09/1998 – 05/2003