Volodymyr Demchynskyi

PROFESSIONAL SUMMARY

I am a highly skilled machine learning engineer with over 7 years of experience. With a strong background as a machine learning engineer and data scientist, my expertise lies in natural language processing and computer vision.

SKILLS

- **Libraries/APIs**
  PyTorch, XGBoost, Scikit-learn, Pandas, Matplotlib, Beautiful Soup, TensorFlow, Keras, SciPy, NumPy, Gradio, SpaCy, jQuery, React, HTMX
- **Tools**
  Rasa.ai, Apache Airflow, Jupyter, GitHub, Git, ChatGPT, Haystack, Sublime Text, GitLab CI/CD, Tableau, PyCharm, IBM Watson, Pytest, Yahoo! Finance
- **Languages**
  Python, SQL, ABAP, Java, R, JavaScript, TypeScript, HTML, CSS, React, Next
- **Frameworks**
  LightGBM, Django, Scrapy, Flask
- **Paradigms**
  ETL, Continuous Integration (CI), Continuous Deployment, Test-driven Development (TDD), REST, Scrum
- **Platforms**
  Docker, Google App Engine, MacOS, Linux, Google Cloud Platform (GCP), Kubernetes, Oracle, Apache Kafka, AWS Lambda, Amazon Web Services (AWS), Vercel, Azure, Blockchain
- **Storage**
  Data Pipelines, PostgreSQL, MySQL, Elasticsearch, PostGIS, MongoDB, Data Lakes, Google Cloud
- **Other Skills**
  Data Analytics, Chatbots, Artificial Intelligence (AI), Data Analysis, Statistical Data Analysis, Natural Language Processing (NLP), Data Engineering, Data Science, Machine Learning, SAP, Natural Language Understanding (NLU), Generative Pre-trained Transformer 3 (GPT-3), Generative Pre-trained Transformers (GPT), Text Generation, FastAPI, Language Models, Machine Learning Operations (MLOps), Large Language Models (LLMs), Analytics, Data Scientist, Predictive Analytics, Data Modeling, Generative Artificial Intelligence (GenAI), Image Processing, Serverless, Recommendation Systems, lxml, Web Scraping, Deep Learning, Scientific Computing, Computational Linguistics, OpenAI, LangChain, Technical Leadership, Software Architecture, Full-stack, Llama 2, OpenAI GPT-4 API, Supervised Learning, Unsupervised Learning, Retrieval-augmented Generation (RAG), Supervised Machine Learning, Data Mining, Web Development, Fraud Prevention, Software as a Service (SaaS), Algorithms, Statistics, A/B Testing, Statistical Modeling, Outlier Detection, Cloud, Forecasting, Time Series, Big Data, Maps, OCR, Data Warehouse Design, Google BigQuery, Computer Vision, Games, Optimization, AIOps, Supabase, Product Management, Web3, Architecture, Data Visualization, Dashboards, Finance

WORK HISTORY

Senior Data Scientist | Skillz

03/2021 – 10/2024

- Built the Matchmaking Simulator engine by building an AI player model (combining multiple behavioral ML models) and replicating the production matchmaking engine in Python to allow for fast experimentation. The engine is still in use.
- Improved the matchmaking engine and developed new algorithms using the simulator, leading to a D30 retention lift of 33% and a D30 revenue lift of 11%. Led inter-team efforts to deploy, monitor impact, and scale developed features.
- Built a conversion ML model and integrated it as a component of the Matchmaking Simulator, allowing for experimentation on how the company can drive the conversion rate.
- Operationalized the churn prediction model using AWS, Docker, Kubernetes, GitHub Actions, MLflow, Airflow, and Snowflake.
- Researched industry-standard solutions, built a simulation framework, selected the most viable solution, and implemented production-ready code, allowing for efficient rating updates for multiplayer games.
- Owned matchmaking, offering advice and answering questions of leadership and business stakeholders. Led experimentation and analytics matchmaking efforts. Cooperated with engineering, analytics, and product organizations.
- Planned and supervised the work of a junior team member.

Senior Machine Learning Engineer | BP

10/2018 - 02/2021

- Designed and built the cloud architecture for the data analysis platform for development and production in the Azure cloud.
- Used platforms and tools like ADF, Azure Data Lake, Azure Databricks, Azure DevOps, Azure Key Vault, Delta Lake, MLflow, Azure Machine Learning, Azure Kubernetes Service, Azure Synapse Analytics, and Power BI.
- Preprocessed, cleaned, and identified outliers in the training data for further examination with the business. Some example techniques used are DBSCAN and Isolation Forest.
- Built the DNN regression model for the forecasting cost of oil drilling-related activities based on historical data. Used PyTorch and PyTorch Lightning.
- Conducted experiments and statistical tests like analysis of variance (ANOVA) and applied AI solutions.
- Managed cloud automation of the labor and overhead of the cost forecasting process, previously done manually in Excel sheets by analysts.
- Administrated the Databricks cloud data analysis platform. Built and optimized existing ETL pipelines using PySpark. Introduced production monitoring with Azure application insights into the project.

- Maintained and developed the time series forecasting library. Managed the production submission of the quarterly cost forecasts, decreasing the running time of the quarterly forecast 14 times utilizing multiprocessing.
- Built and deployed the web API using FastAPI, Docker, and Azure Web App to implement time series models to make them accessible for non-data scientists within the company. Built the Power BI report showcasing the usage of the API.
- Created the auto-deployment pipeline for the newest version of the internal time series forecasting library into the Spark cluster. Built the CI pipeline on Azure DevOps, running code quality checks and unit tests with training for the team.

Full-Stack Developer | Infosys

11/2015 - 08/2018

- Handled marketing using Dash technology and developed and deployed a business intelligence dashboard for the FMCG industry recommendation system to help marketing teams better understand and target their customers.
- Managed a banking supply chain analysis. Given internal bank transaction data, I developed a solution for analyzing the impact of the default of some business entities on other businesses.
- Led a PoC project for an academic institution that turned into a long-term engagement, aiming to answer questions in the natural language using a knowledge graph. The solution utilized built intent classification and named entity recognition (NER).
- Spearheaded an unstructured data insights project. Its goal was to get insights about unstructured raw text data using techniques models like topic modeling (LDA) and sentiment analysis (BERT).

EDUCATION

Vinnytsia National Technical University *2010-2014*
Bachelor's degree : Computer Science

Vinnytsia National Technical University *2014-2015*
Master's degree : Data Science

LANGUAGE

- **English** : Fluent
- **Ukrainian** : Native or Bilingual