Vlad S
Senior ML Engineer with Data Engineering skills

SUMMARY

- Experienced Machine Learning Engineer with Data Engineering skills - Experience in ensemble recommendation systems, customer behavior prediction, and recruitment insights, analytics, chatbots. - Experience in user retention, engagement, operational efficiency increase, enhancing stock turnover, forecasting accuracy, automated damage assessment models, and vehicle security through advanced ML models and BigData. - Worked with industries: insurance, finance, restaurants - Solid expertise with Big Data, Natural Language Processing, Computer Vision

TECHNICAL SKILLS

Main Technical Skills	Python, TensorFlow, Snowflake, AWS Redshift
Programming Languages	Java, Python
AI & Machine Learning	Amazon Machine learning services, AutoGPT, AWS ML (Amazon Machine learning services), Hugging Face, Kubeflow, LangChain, Prompt Engineering, PyTorch, RAG, T5, TensorFlow
JavaScript Libraries and Tools	Immutable.js
Python Libraries and Tools	Matplotlib, NLTK, Plotly, PyTorch, Seaborn, TensorFlow
Java Frameworks	Struts 2
Data Analysis and Visualization Technologies	Apache Hive, Data visualization, DVC, Kibana, Looker Studio, Power BI, Tableau
Databases & Management Systems / ORM	Apache Hive, AWS ElasticSearch, AWS Redshift, Clickhouse, ELK stack (Elasticsearch, Logstash, Kibana), HDFS, Snowflake
Amazon Web Services	AWS ElasticSearch, AWS ML (Amazon Machine learning services), AWS Redshift
Azure Cloud Services	Azure DevOps
Google Cloud Platform	Google BigQuery
Version Control	Github Actions
Logging and Monitoring	Logstash, Prometheus
Codecs & Media Containers	MPEG-DASH

Other Technical Skills	Flink, JAX RS, Legacy Application, TFX

WORK EXPERIENCE

Senior ML Engineer

January 2022–October 2024

Responsibilities:

- **AI-Powered Personalized Fitness Regimens:** Designed a recommendation system using NCF and DMF ensemble followed by BERT2Rec integrated with wearable data to deliver tailored workout routines and real-time adjustments, boosting gym member retention and engagement. Improved workout adherence by 35%, increased retention by 22%, and achieved 87% recommendation accuracy.
- **Recruitment Assistant**: Implemented recruitment assistant using Sentence Transformers for CV analysis, GPT-4 API for screening and feedback, and a Pinecone for knowledge base RAG. Orchestrated workflows with LangChain and deployed on Azure Cloud, reducing hiring time by 20% and improving candidate-job match accuracy by 11%.
- **Customer Purchase Pattern Prediction**: Developed a hybrid time-series clustering model (Prophet, LSTM, DBSCAN) on GCP to analyze purchase behavior and forecast demand, optimizing stock and sales for a retailer. Improved stock turnover by 20%, and forecasting accuracy by 25%, with 85% demand prediction accuracy.

Senior ML Engineer

October 2020–January 2022

Responsibilities:

- **Voice-Activated Reservation System:** Implemented a voice recognition system using Google Dialogflow and Google Speech-to-Text, integrated with the restaurant's reservation calendar to streamline the booking process. Reduced manual reservation handling time by 74%, boosted the number of reservations by 33%, and decreased call volume to the hotline by 18%.
- **Automated Damage Assessment for Car Insurance Claims**: Developed a damage detection model by fine-tuning YOLO on a synthetic dataset on AWS SageMaker to identify and assess vehicle damage from uploaded images, accelerating insurance claims processing. Reduced claim processing time by 45%, improved damage assessment accuracy by 14%, and achieved .97 precision in damage classification, increased the number of claims processed per day by 28%.

Senior ML Engineer

April 2018–October 2020

Responsibilities:

- **License Plate Recognition for Residential Security Gates:** Developed a license plate recognition system using MobileNet followed by Tesseract OCR pipeline, integrated with gate control systems to enhance security and streamline vehicle entry in gated communities. Reduced entry time by more than twice, and achieved 97% average charwise accuracy in license plate recognition.

- **Real Estate Price Prediction for Property Valuation**: Built an XGBoost model, leveraging historical property data to predict property values based on location, square footage, and amenities. Increased price prediction MSLE by 28% and improved decision-making for buyers and agents. Used SHAP to understand the impact of different features on price predictions.
- **Customer Segmentation for Behavioral Analysis in Retail**: Applied K-Means Clustering and DBSCAN on Scikit-Learn to segment customers using POS data on transaction history and product preferences. Enhanced targeted marketing efficiency by 20%, increased customer retention by 15%, and achieved 88% ROC AUC in segmentation, enabling targeted marketing efforts and loyalty programs.

EDUCATION

Master's Degree, BELARUSIAN STATE UNIVERSITY, 2022

"Self-Adaptive Algorithms for Real-Time Anomaly Detection in Dynamic Data Streams", thesis on advanced Natural Language Processing and Statistical Modeling techniques, and published a research paper on integrating Bayesian models with transformer architectures for domain-specific text generation.

Bachelor's Degree, BELARUSIAN STATE UNIVERSITY, 2020

"Probabilistic Topic Modeling with Variational Inference for Large-Scale Document Clustering.", achieved top performance in Computational Mathematics, specializing in numerical methods and linear optimization, and led a team to build a recommendation system, utilizing statistical and ML models, which earned recognition in a national competition.