Nadya
Senior Data Scientist, Data Analyst & BI

SUMMARY

- 10+ years in Forecasting, Analytics & Math Modelling
- 8 years in Business Analytics and Economic Processes Modelling
- 5+ years in Data Science
- 5+ years in Financial Forecasting Systems
- Master of Statistics and Probability Theory (diploma with honors), PhD (ABD)
- BSc in Finance
- Strong knowledge of Math & Statistics
- Strong knowledge of R, Python, VBA
- Strong knowledge of PostgreSQL and MS SQL Server
- 3 years in Web Development: Knowledge of C#, .Net and JavaScript for web development
- Self-motivated, conscientious, accountable, addicted to data processing, analysis & forecasting
- Engineering, Understanding AI and LLMs

TECHNICAL SKILLS

Main Technical Skills	Data Analysis (10 yr.), Python, Prompt Engineering
Programming Languages	C#, Elixir, JavaScript, Python, R
.NET Platform	ASP.NET Core Framework, ASP.NET MVC, Entity Framework
R Libraries and Tools	caret, dplyr, rEDM, tidyr
JavaScript Libraries and Tools	dash.js
Python Frameworks	Flask
Python Libraries and Tools	Matplotlib, NLTK, NumPy, Pandas, Plotly, SciPy, TensorFlow
AI & Machine Learning	NumPy, Prompt Engineering, TensorFlow
R Frameworks	Shiny

Data Analysis and Visualization Technologies	Basic Statistical Models, Chaos Theory, Cluster Analysis, Data Analysis (10 yr.), Decision Tree, Factor Analysis, Jupyter Notebook, Linear and Nonlinear Optimization, Logistic regression, Multi-Models Forecasting Systems, Nearest Neighbors, Nonlinear Dynamics Modelling, Own Development Forecasting Algorithms, Pandas, Principal Component Analysis, Random Forest, Ridge Regression
Databases & Management Systems / ORM	Microsoft SQL Server, PostgreSQL
Cloud Platforms, Services & Computing	AWS, GCP
Third Party Tools / IDEs / SDK / Services	Anaconda, Atom, R Studio, Visual Studio
Version Control	Git
SDK / API and Integrations	RESTful API
Operating Systems	Windows
Other Technical Skills	Predictive modeling

PREDICTIVE MODELING DATA SCIENTIST EXPERIENCE

Probabilistic methods & Bayesian inference

- Bayesian inference (hierarchical models), Bayesian Networks, Gaussian Processes (incl. GP hazards, monotone links)
- MCMC (HMC/NUTS), SVI
- Diagnostics & calibration (R-hat/ESS, reliability/Brier, isotonic)
- Conformal prediction & uncertainty quantification

PPLs & libraries

- PyTorch. TensorFlow, scikit-learn, PyMC, TensorFlow Probability, Stan, pycox / scikit-survival

Time series & forecasting

- Time-series forecasting for hazards/risk
- State-space models & filtering (e.g., Kalman/particle)

Data & scale

- Wrangling large messy clinical/claims/OCR’d datasets, Missing data & censoring (MICE/IPCW/etc.)
- Feature stores & evaluators (Feast or custom)

- Distributed compute (Dask/Spark)

Model engineering & reproducibility

- Reproducible pipelines (MLflow/DVC/W&B)
- Testing: data/feature-leakage controls

Domain knowledge

- Survival modeling in life insurance/life settlements, How survival PDFs feed policy DCF/NAV & fund constraints
- Actuarial basics (mortality tables, DCF/NAV)
- Finances, Retail, Real Estate

COMMERCIAL EXPERIENCE

Prompt Engineering and Data Science Analyst, NDA

2024 - now

DATA SCIENCE & ANALYST, Real Estate

May 2021 - 2024

Forecasting of real estate pricing:

- Regression analysis for trends
- Moving windows to consider mostly the newest history
- Seasonal analysis
- Microcycles and large- and medium economical cycles analysis using Fourier approach and patterns recognition

Technologies: Python, python libraries: pandas, numpy, sklearn, scipy, seaborn, matplotlib, plotly

DATA ANALYST, AMAZON FBA PROJECT

July 2020 - April 2021

Overview: Next-generation consumer goods company reimagining how the world's most-loved products become accessible to everyone. We use a deep understanding of rankings, ratings, and reviews to identify and acquire quality brands and use world-class expertise and data science to make their products better or create new ones to meet changing customer demand.

Responsibilities:

- Development of Analytical Dashboards
- ETL implementation for returns and orders data
- Data cleaning, validation, reconciliation
- Preparing of BI Reports using Periscope based on AWS
- Building causal impact estimation for significant sales dynamics changes
- Technologies: Periscope, SQL, Python (Pandas, NumPy, Plotly), R (CausalImpact)
- Create and support ELT data pipelines built on Snowflake and DBT while ensuring high-quality data

- Develop and deploy data warehousing models, and support existing processes/ETLs (extract/transform/load), and functions (in Python/SQL/DBT) in a cloud data warehouse environment using Snowflake, AWS services
- SQL statements and developing in Python, Design and develop data pipelines (DAGs). Automation tests.

Technologies: Sisense BI, AirFlow, ETL, ElasticSearch, Snowflake, Python, SQL, DBT, Pandas, AWS S3, Medallion Architecture, MySQL, Hadoop, Spark, GitLab CI/CD, Kubernetes, LDAP, Automation Test, Pytest, Snowflake Schema, Dimensional Modeling, ER Diagrams.

DATA SCIENTIST, DEVELOPER & PROJECT MANAGER

March 2018 – 2020

Responsibilities:

- Development of Analytical Platform using Nonlinear Dynamical approach and NLP combined
- Preparing of BI Reports using Periscope based on AWS
- Development, implementation, support and enhancement of forecasting systems for cryptos, metals and currencies basing on nonlinear dynamics models; creation of own nonlinear forecasting algorithms
- Work on Adverts parsing and processing projects
- Development of interactive 3D Globe for Economic Data Visualization
- Developing Web applications on ASP.NET Core – e.g. Web API, EF for the following systems:
    - Medical data storage system
    - Financial flows system
    - Global hotels booking system
- Development of interfaces for booking portals
- Different projects for website optimization and development

Technologies: Python (Pandas, NumPy, Plotly, NLTK, Matplotlib, SciPy, TensorFlow, Dash, Flask, etc.), R (Shiny, dplyr, tidyr, caret, rEDM, etc.), C#, Elixir, JavaScript, Microsoft SQL Server

SENIOR MATHEMATICIAN, DATA SCIENTIST

August 2016 – February 2018

Responsibilities:

- Development, implementation, support and enhancement of forecasting systems for sales indices
- Creation of analytical and forecasting products basing on multi-dimensional nonlinear forecasting, multi-models forecasting systems, nearest neighbors, ridge regression, logistic regression, random forest, cluster analysis, factor analysis, principal component analysis
- Preparing multiple decks on the project results for the clients

Technologies: R (Shiny, caret, rEDM, etc.), Python (Pandas, NumPy, Matplotlib, SciPy), PostgreSQL

PROJECT MANAGER, ECONOMIC PROCESSES MODELING EXPERT

March 2008 – August 2016

Responsibilities:

- More than 30 successful industrial market research projects: market research and modeling, SWOT and COST analysis, market niches identification, market volumes and sales forecasting, etc.
- Development and implementation of forecasting and classification systems for a number of subscribers for information & analytical products
- Development and implementation of a nonlinear forecasting system for price forecasts
- Construction of optimization models for industrial markets for deep analysis of structure and prospects of the markets
- Development and implementation of the unique charts format (including Cost Curve and others)
- Participation in international conferences

EDUCATION

Oles Honchar Dnipro National University.

- **PhD (ABD) in Mathematics (Statistics & Probability Theory),** 2009 - 2013.
- **Master's degree in Mathematics (Statistics & Probability Theory)**, 2003 – 2008;
- Economist (Enterprise Finance, Bachelor's degree) 2006 - 2009.