KIRILL NARTOV

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Technologist with 5 years of experience in data analytics and business analysis, with a focus on the automotive industry.

PROFESSIONAL EXPERIENCE

University of Michigan, Automotive Engineering Lab | Statistical Researcher **Michigan, US | Nov 2023 - Present**

- Engaged with key stakeholders (e.g., Toyota, UM Transportation Research Institute) to gather, document, and analyze both functional and non-functional requirements for research projects, translating them into actionable specifications and clear acceptance criteria.
- Applied advanced data analysis techniques using Pandas and SQL to extract, transform, and analyze participant data, delivering insights into driver interactions with their car and embedded AI-driven mobility systems.
- Streamlined research processes by documenting workflows and methodologies, ensuring knowledge transfer of completed projects.
- Developed predictive models with Scikit-Learn and PyTorch to forecast driver behavior in response to automation actions, offering insights that informed system enhancements and product innovation.
- Designed and deployed an interactive online dashboard using Pandas, Plotly, Streamlit, Flask, and GCP, providing real-time data visualization and reporting tools that empowered Toyota to make informed decisions on the adoption of automotive technologies.
- Performed data mining and sentiment analysis on qualitative interview data to quantify and report the key factors influencing driver responses to automated vehicle malfunctions, delivering insights to the UM Transportation Research Institute.

University of Indianapolis, Academic Support Department | Data Analytics Consultant **Indiana, US | Aug 2022 – Sep 2023**

- Documented and standardized analytical processes for continuous improvement and replicability, ensuring alignment with cross-departmental goals (enrollment, marketing, and engagement).
- Developed a student performance tracking pipeline utilizing a time-series moving average algorithm in Pandas, applied to online survey data integrated via the Google Drive API. Visualized the results in a Streamlit dashboard with Seaborn, leading to a 17% improvement in the department's average student grade.
- Created detailed documentation for the newly implemented student performance tracking system, ensuring that knowledge was retained and easily accessible for future system updates.
- Streamlined academic support services by applying a k-means clustering algorithm to categorize students based on learning needs, optimizing tutor matching and increasing student satisfaction by 38%.

Volkswagen Group sub, After Sales Department | Business Analyst **International | Apr 2020 – Jul 2022**

- Managed communication with stakeholders from different teams (VW, Audi, Skoda, Bentley, Ducati) by collecting, organizing, and analyzing business requirements for the development and improvement of After Sales KPI reports and enterprise systems.
- Mapped business processes AS IS and TO BE using BPM notation and translated requirements into functional and non-functional specifications and actionable user stories.
- Designed data flows and integrations of new enterprise systems by analyzing client operations and data from databases by utilizing PostgreSQL and API.
- Derived dealership insights (e.g., median customer service time per dealership, customer-to-mechanic ratios) by ingesting, and analyzing large data using Pandas. This analysis identified underperforming dealerships, leading to a reduction of over $0.55 M in operational costs.
- Launched the development of a cloud-based After Sales car maintenance service, designing its data flow and database structure, which led to a declined time of maintenance labor and increased quarter revenue by 12.4% (over $1.16 M annually).
- Renovated the workflow of sales managers by delivering a new cloud-based sales system, defining its functional design, integration concepts with other systems, and database structure, resulting in an average sales time reduction of 15 minutes (~ $0.8 M annually).
- Streamlined the monitoring process for regional recall campaign completion by identifying and resolving inconsistencies and duplicates in data used for key metrics (e.g., average number of cars in a recall campaign by region) across multiple database tables with PostgreSQL and Tableau Server for reporting the findings, resulting in quarterly savings of over 21,000 man-hours (more than $0.9 M annually).

Insurance Group INGO, Auto Insurance Department | Product Analyst **International | Feb 2019 – Mar 2020**

- Managed the end-to-end development of an auto insurance product by leading a cross-functional team of 6 members.
- Created and prioritized a backlog of tasks, facilitating effective sprint planning and maintaining clear communication with stakeholders.
- Developed and validated hypotheses using statistical techniques like ANOVA and chi-square which directly supported data-driven decision-making processes, enhancing operational efficiency for a digital business unit.
- Translated business needs into clear system specifications and ensured their efficient delivery by the technical team through comprehensive user acceptance testing (UAT).
- Utilized BPM notation to document and analyze business processes, enabling transparent communication and ensuring replicability in the development and implementation of new systems and products.
- Automated biweekly customer support reporting using API, SQL Server, and Pandas with Python, cutting down report generation time from 14 hours to just 2 hours. It allowed several department teams to allocate 12 additional hours for other tasks (over $20 K quarterly).
- Identified the need for new features in an auto insurance product (policy term customization, telematics-based discount) by hypothesizing and conducting A/B testing on a website (on click-through rate), resulting in a 7% increase in customer retention (~ $0.67 M annually).
- Designed and implemented interactive dashboards in Tableau that visualized KPIs (e.g., quarter churn rate, customer lifetime value) and enabled real-time monitoring of product metrics, driving a 15% increase in decision-making speed for the executives (~ $0.41 M a year).
- Reduced report generation time from 14 hours to just 2 hours for the customer support department by redesigning business workflows and implementing automated reporting tools at key bottlenecks, delivering timely and reliable insights on insurance policy changes and generating over $20K in savings per quarter.

PROJECTS

Full-stack web app: real-time emotion recognition, Project

- Developed and deployed a full-stack web app on GCP featuring a computer vision model that recognizes emotions in real-time. The model, achieving 82% accuracy, was built using transfer learning of ResNet-50 and trained on an exclusively assembled dataset.

Allstate customer prediction, Project

- Improved the company's product promotion by building a binary classification model (%88 accuracy) to predict a potential customer through a machine learning ensemble model (Log. Regression, Decision Tree, Random Forest, Grad. Boosting, XGBoost).

Online marketplace customer behavioral analysis, Project

- Enforced a recommendation system by defining 4 customer segments with distinctly different buying behaviors using the k-means clustering algorithm based on features designed from the ground up, such as conversion rate, total spend, and customer value.

EDUCATION

University of Michigan | Master of Science - Data Science (expected) Dec 2024

TECHNICAL SKILLS

Languages: Python (Matplotlib, Seaborn, NumPy, Pandas, Scikit-Learn, PyTorch, OpenCV, Flask), SQL (MySQL, PostgreSQL)
System Modeling: Visio, Lucid Chart, UML, BPMN, System Design Diagrams, Business Process Mapping, Data Flow modeling, Functional Decomposition, Use-Case Analysis, TOGAF, API Testing (Postman, Swagger), Database Modeling (Crow's foot, Chen's notation)
Tools: Excel (VBA, pivot), API, Tableau (Desktop, Server, Public), Power BI, Spark, Hadoop, Hive, Google Cloud Platform, BigQuery
Expertise: ETL Pipeline (Ingesting, Wrangling, Warehousing, Modeling, Interpretation), Hypothesis Testing (A/B Testing, ANOVA, t-test)
AI / ML algorithms: Supervised (Classification, Regression, FCNN, CNN), Unsupervised (Clustering, Market Basket)
Project Management: Jira, Confluence, Git, Agile SAFe, Waterfall, KPI, Requirements and Stakeholders Management, Task Time Estimate, UAT