Anastasiya Kotelnikova
New York, NY | New Jersey | (732) 791-3852 | anastasiyakotelnikova21@gmail.com
GitHub: github.com/AnastasiyaKotelnikova | Portfolio: anastasiyakotelnikova.github.io/Portfolio

TITLE / SUMMARY
Data Scientist | Machine Learning | Python · SQL · AWS
Graduate student with hands-on experience in machine learning, deep learning, and big data processing. Skilled in Python, R, SQL, Hadoop, and AWS. Passionate about applying data-driven solutions to real-world problems.

TECHNICAL SKILLS
Languages/Frameworks: Python, R, SQL, Java, HTML/CSS
Tools/Platforms: Git, GitHub, AWS EC2/S3, HDFS, Hadoop, MapReduce, HBase, Google Analytics, SEMrush, HubSpot, Mailchimp
Libraries/Packages: Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, Norse
Concepts: Machine Learning, Deep Learning, Feature Engineering, Data Wrangling, Data Visualization
Environments: Jupyter Notebook, Google Colab, VS Code, Linux/Ubuntu
Other: Tableau, Business Intelligence (BI), Agile/Scrum, Git version control

EXPERIENCE
AppNova Technologies
Princeton, NJ — Data & Marketing Analyst
March 2016 – November 2024
- Analyzed user behavior and engagement trends across digital platforms using Google Analytics, SQL, Excel, and Colab Notebooks to support growth strategy.
- Built and maintained interactive dashboards and performance reports to communicate KPIs, ROI, and campaign engagement to stakeholders.
- Applied A/B testing, segmentation, and cohort analysis to optimize digital marketing campaigns, increasing organic traffic by 30%+ and improving conversion rates.
- Performed keyword analytics and trend modeling to support data-driven content strategies and improve targeting.
  Automated marketing workflows using Mailchimp, HubSpot, and Python scripting, improving campaign efficiency and reporting speed.
- Collaborated cross-functionally to align **data insights** with business goals and customer lifecycle stages.

Software Used: Google Analytics, SEMrush, HubSpot, Mailchimp, SQL, Python, Microsoft Excel, Google Colab, WordPress, Facebook Ads Manager, Looker Studio.
Key Skills: SQL, Python, Google Analytics, HubSpot, Mailchimp, A/B Testing, Cohort Analysis, KPI Dashboards, Colab, Excel, Data Visualization, Reporting Automation.

Maximus
New York, NY — Enrollment Specialist
January 2015 – December 2015
- Verified client eligibility and maintained accurate records through CRM systems.
- Ensured data integrity through detailed validation and compliance review.

Software Used: CRM Systems, Microsoft Office Suite (Word, Excel), Adobe Acrobat.
Key Skills: Application Processing & Data Verification | Customer Service & Issue Resolution | Knowledge of Compliance Standards (Healthcare, Medicaid) | Record Management & Data Entry | Communication & Interpersonal Skills | Attention to Detail & Problem-Solving.

LogistiCare
Edison, NJ — Quality Assurance Specialist
April 2009 – January 2015

- Conducted audits to ensure compliance with operational data standards and policies.
- Tracked and reported performance metrics using SQL to support quality improvement efforts.

Software Used: SQL, Microsoft Excel, PowerPoint, Tableau, Zendesk.
Key Skills: Data Analysis (Excel, SQL) | Process Improvement & Compliance | Communication & Reporting | Attention to Detail & Problem-Solving.

EDUCATION

NJIT Ying Wu College of Computing

Newark, NJ — **M.S. Data Science, Grade: 3.9**
SEPTEMBER 2024 - PRESENT

- Currently pursuing a Master's degree in Data Science, focusing on machine learning, statistical analysis, and big data technologies.
- Completed graduate-level coursework: Machine Learning, Deep Learning, Big Data Essentials, Data Analytics with R, Applied Statistics.
- Actively applying data preprocessing, model evaluation, and feature engineering in hands-on projects.

Big Data Essentials Certificate, Awarded May 2025 – Focused on Hadoop, MapReduce, HDFS, AWS EC2, and cloud-based data engineering tools.

MONTCLAIR STATE UNIVERSITY

Montclair, NJ — B.S. Business Administration and Management

- Gained a solid foundation in business principles, including financial management, organizational behavior, and strategic planning.
- Developed strong analytical and problem-solving skills through coursework and projects.
- Participated in group assignments, enhancing teamwork and effective communication skills.

PROJECTS

1. **Spiking Neural Networks with PyTorch**

- Led implementation of biologically inspired spiking neural networks (SNNs) using PyTorch and Norse.
- Benchmarked against traditional ANNs on SHD and N-MNIST datasets.
- Tools: Python, PyTorch, Norse, Deep Learning, Neuromorphic Computing.

2. **AWS MovieLens MapReduce**

- Deployed Hadoop on AWS EC2 and executed a MapReduce job to process 1M+ movie ratings from the MovieLens dataset. Identified most-rated and top-rated movies using custom Java classes.
- Tools: Java, Hadoop, AWS EC2, MapReduce, HDFS

3. **COVID-19 Case Forecasting with LSTM**

- Designed LSTM models in Python to forecast regional COVID-19 case surges using time-series data. Supported public health planning with evaluation using RMSE and MAPE.
- Tools: Python, LSTM, Pandas, Time Series, ML.

4. **Equity Portfolio Optimization (R)**

- Simulated $5M stock portfolio rebalancing using historical market data. Compared daily vs. periodic rebalancing strategies based on market-to-market (MTM) pricing.
- Tools: R, Time Series, Portfolio Theory, Data Visualization.

5. **House Price Regression in R**

- Applied advanced regression techniques to predict housing prices. Focused on feature engineering, preprocessing, and performance evaluation using RMSE and R^2.
- *Tools: R, Regression, Feature Engineering, RMSE*
- rebalancing strategies based on market-to-market (MTM) pricing.

6. **Human vs AI Text Classifier**

- Designed and implemented a machine learning pipeline to classify written content as human- or AI-generated, using a custom-labeled dataset of 5,000 examples.
- Engineered features using TF-IDF and trained, validated, and compared multiple classifiers including Logistic Regression, Naive Bayes, SVC, and Random Forest.
- Conducted model evaluation using precision, recall, and F1-score; optimized the best-performing model for interpretability and deployment.
- Tools: Python, Scikit-learn, TF-IDF, Joblib, Logistic Regression, SVC, Random Forest.