

Anastasiya Kotelnikova

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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, HDFS, Hadoop, MapReduce, HBase

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 — Digital Marketing Specialist

March 2016 – November 2024

- Developed and executed digital marketing campaigns, driving website traffic and increasing customer engagement.
- Managed SEO strategies, resulting in improved search engine rankings and organic traffic growth.
- Monitored and analyzed campaign performance using Google Analytics, providing actionable insights to optimize ROI.
- Created and curated content for social media platforms, enhancing brand visibility and audience interaction.
- Collaborated with cross-functional teams to align marketing strategies with business objectives.

Software Used: Google Analytics, SEMrush, HubSpot, Mailchimp, Microsoft Excel, WordPress, Facebook Ads Manager.

Key Skills: Digital Campaign Management (PPC, Social Media Ads) | SEO & SEM Optimization | Web Analytics (Google Analytics, SEMrush) | Content Creation & Social Media Strategy | Email Marketing Tools (Mailchimp, HubSpot) | Communication & Team Collaboration | Data Analysis & Reporting

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**

SEPTEMBER 2024 - PRESENT

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

Big Data Essentials Certificate, Earned 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 Nornox.
- Benchmarked against traditional ANNs on SHD and N-MNIST datasets.
- Tools: Python, PyTorch, Nornox, 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

- Built 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

