Anastasiya Kotelnikova

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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

New Jersey Institute of Technology (NJIT)
Newark, NJ - IT Support Technician
Jul 2025 – Present
- Deliver on-site technical support for classroom, lab, and instructional AV systems including computing stations, projectors, audio systems, and network-connected devices.
- Troubleshoot Windows-based systems, network connectivity, peripherals, and BYOD device compatibility under time-sensitive conditions.
- Use **Webex**, campus **ticketing systems**, and **Sling scheduling platform** to coordinate responses, log support activity, and ensure timely resolution of technical issues.
- Assist with monitoring, diagnostics, and maintenance of AV and computing inventory; perform device functionality checks and reliability testing.
- Communicate technical updates with faculty and IT team to ensure minimal disruption to instruction.
- Gained foundational exposure to IT infrastructure, real-time troubleshooting, and data security best practices.

Key Skills: Windows 10, Webex, Sling, Service Tickets, AV Systems, BYOD Support, Troubleshooting, Device Imaging, Team Collaboration, Time Management.

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 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**
 ● 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*
6. **CMEPredict – GRU & LSTM Model Comparison**
 ● Rebuilt GRU and LSTM models to classify solar wind CME events across 5 time windows (12–60 hrs). Focused on time-series data reshaping, reproducibility, and performance evaluation using ROC-AUC and confusion matrices.
 ● *Tools: Python, TensorFlow, Keras, GRU, LSTM, Time Series, Binary Classification, ROC-AUC, Confusion Matrix*