

# NIKITA SAFRONOV

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## EDUCATION

**Binghamton University, State University of New York**

*Master of Science in Mathematics and Statistics*

*Bachelor of Science in Mathematics and Statistics*

Binghamton, NY

Expected December 2026

Expected December 2025

- Dean's List: Fall 2023-Spring 2025 | **GPA: 3.91/4.00**

**Relevant Coursework:** Time Series, Advanced Statistical Learning, Statistical Modeling, Practical Data Analysis, Probability, Statistical Inference, Computational Linear Algebra, Scientific Computing, Real Analysis, Complex Analysis, Differential Geometry

## TECHNICAL SKILLS

**Programming:** Python (PCEP Certified; Pandas, Scikit-learn, PyTorch, Matplotlib, Seaborn), R, SQL, MATLAB

**Tools:** Git, Jupyter, Docker, Microsoft Office Suite, Google Workspace

**Problem Solving:** Putnam (Scores: 18 in 2023, 16 in 2024), 800+ Leetcode Problems Solved, 800+ Quantable Problems Solved

**Languages:** English (Native), Russian (Native)

## PROFESSIONAL EXPERIENCE

**Binghamton University**

May 2025 - Present

*Undergraduate Researcher*

*Binghamton, NY*

- Simulate **200k** 3D faces by injecting controlled signal patterns into the top 5 principal components of real facial geometry (**R+scikit-learn**) to create a benchmark for downstream feature significance analysis
- Optimize **PyTorch** curvature autoencoder via exhaustive 7-hyperparameter grid search (**>1,500 models**) with 3-fold CV
- Compress high-resolution facial matrices (**7,000** values/face) into **20** latent dimensions, cutting memory and compute by **300x**
- Cut false discovery rate by **50%** with novel Curvature+Autoencoder pipeline; benchmarked against XYZ+PCA and Curvature+PCA via **CCA+FDR\_q** to rank reproducible geometric drivers

**Outlier.ai (Scale AI subsidiary)**

July 2024 - August 2025

*Mathematical Model Analyst and Optimization Specialist*

*New York, NY (Remote)*

- Enhanced **OpenAI's** LLM accuracy by **30%** through Reinforced Learning from Human Feedback (RLHF) methodology
- Executed over **3000** Mathematics and Statistics tasks essential for creating high-quality training data for ChatGPT
- Promoted to Senior Reviewer of tasks on **8** different projects due to an exceptional **4.7/5.0** average task rating

**DataAnnotation.tech**

May 2024 - July 2024

*Data Annotator*

*New York, NY (Remote)*

- Trained AI models to manipulate and visualize structured datasets by creating tasks requiring **Pandas, NumPy, and Matplotlib**, ensuring accurate data cleaning and efficient data handling
- Evaluated and corrected AI-generated code and visualizations on **50+** dataset tasks weekly to improve model accuracy

## PROJECT EXPERIENCE

**Discord User Enhancement with Fairfield University** | <https://discorduserenhancement.netlify.app>

June 2022 - May 2023

*Code Assistant, Bot, and Website Developer*

*New York, NY (Remote)*

- Developed a **full-stack** Python application to improve the experience of controlling and censoring hate speech on Discord servers
- Utilized **Discord API** with the **Repl.it** platform and the **Uptime Robot** website monitoring service to deploy the designed bot to Discord servers successfully, resulting in a **70%** increase in hate speech censorship and over **100** downloads
- Collected user interaction data in confidential CSV files and identified the most censored hate speech to target in the future

## LEADERSHIP EXPERIENCE

**Binghamton University Poker Club**

March 2024 - Present

*Secretary*

*Binghamton, NY*

- Utilize **Google Sheets** to keep track of participants' point distribution given from each game in order to manage player rankings
- Assist in the planning and execution of weekly on-campus and in-state club poker tournaments and social events, ensuring a smooth and enjoyable experience for over **150+** interested members

**Emerging Leaders Program (ELP)**

August 2023 - December 2023

*Participant*

*Binghamton, NY*

- Worked together with fellow ELP members in weekly discussions to develop a community service project that helped improve various aspects of the Binghamton community, such as volunteering in dog shelters and canvassing for the exposure of restaurants
- Contacted and collaborated with various organizations for insight and cooperation in fulfilling the duties of the various projects