ALLAN ILYASOV

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EDUCATION

St. John's University – Queens, New York

Master of Science, Data Science **May 2026**

Bachelor of Science, Computer Science **May 2025**

- Dean's List 2021-2025 | Member of the Association for Computing Machinery | EPIC Mentoring Program, Student Mentor

RELEVANT EXPERIENCE

Graduate Research Assistant – **St. John's University** **February 2024 – Present**

CIRO AI Assistant (Dr. Giancarlo Crocetti): **May 2025 – Present**

- Joined a project that delivers an agentic campus chatbot. Currently working on classroom integration.
- Implemented a post-signup survey system using React frontend with Lambda-powered API Gateway endpoints, integrating DynamoDB for persistent storage of student academic preferences and support needs to enhance personalized tutoring experiences.

Codify AI – Advancing Education Through Generative AI & LLM (Dr. Fazel Keshtkar): **February 2024 – Present**

- Lead Full-Stack Developer of codifyai.org.
- Architected an AI-powered programming tutor leveraging AWS Bedrock (Claude 4.5 haiku), achieving 50% response time improvement through optimized prompt engineering, and LangChain-based agentic workflows.
- Designed production-ready AWS infrastructure (Elastic Beanstalk, DynamoDB, Route 53, HTTPS) with Docker containerization, supporting scalable REST API architecture.
- Built React-based adaptive learning platform with persistent state management, real-time progress tracking.
- Earned 2nd place & "Most Commercializable Project" award at the 2025 St. John's University's Student Research Conference. Presented at the Middle States Commission on Higher Education (MSCHE) Conference. stjohns.edu/news-media/news/2025-01-13/ai-tutor-team-presents-msche-conference.

ADDITIONAL EXPERIENCE

Founding Member – **Uncle Edik's Pickles** **December 2019 – Present**

- Joined a home-based pickle start-up and supported its growth into a brick-and-mortar factory and national brand.
- Lead a team of 5 employees in production of thousands of jars per week of 9 different pickled products.
- Created and edited multiple pages on uncleedikspickles.com/potion, to be accessed via QR codes displayed on our product.
- Ensure compliance with NYS Food Safety regulations & maintained quality control with daily production checklists.
- Designed and approved branded merchandise, and produced viral marketing content, generating millions of views.
- Facilitate sales to customers, pitch & deliver wholesale products to supermarkets, handle supply runs from Restaurant Depot.

SKILLS SUMMARY

- **Programming Languages**: Python, Java, SQL, R, JavaScript, Swift, TypeScript, C++, PHP
- **Frameworks & Libraries**: React, Next.js, Django, Flask, Spring Boot, Node.js, LangChain, LangGraph, REST APIs, Pandas, NumPy, Scikit-learn, TensorFlow/Keras, PyTorch, Spark, Beautiful Soup, NLTK, Spacy
- **Cloud & DevOps**: AWS, Docker, DynamoDB, Elastic Beanstalk, Lambda, API Gateway
- **Language Skills:** English and Russian native speaker | Intermediate proficiency in Spanish

PROJECTS

ESP32-L Alarm Clock with E-Ink Display & iOS App | www.github.com/allanliya/alarm-clock **January 2026**

- Built an alarm clock using an ESP32 and e-ink display to reduce nighttime light exposure and eliminate phone dependency during wake-up, featuring a physical snooze and dismiss button and an I2S DAC amplifier with speaker output.
- Designed a BLE-based iOS companion app for initial setup and configuration, enabling alarm scheduling, brightness control, and custom sound uploads while keeping daily alarm operation fully device-local.

Time Series Forecasting for Financial Markets | github.com/allanilya/Stock-analytics **October 2025 – November 2025**

- Created ARIMA, LSTM, and GRU models for stock prediction (AAPL, NVDA, LYFT), achieving 64-82% RMSE reduction.
- Implemented grid search across 36 ARIMA configurations and built 2-layer LSTM/GRU architectures with dropout regularization utilizing Python, TensorFlow, and Statsmodels.
- Conducted stationarity analysis using ADF tests and automated data extraction for 1,458+ trading days via yfinance API.

Multimodal Video Analysis | github.com/allanilya/Multimodal-Video-Analysis **June – July 2025**

- Developed full-stack AI video analysis platform with Flask/Next.js featuring CLIP-based visual search, transcript search, and Gemini 2.5 Flash multimodal chat with conversational memory.
- Engineered async parallel processing pipeline achieving <3s response time via background frame extraction.

Diabetes Risk Prediction Project | github.com/allanilya/Diabetes-Prediction) **April 2025**

- Tested whether lifestyle or demographic factors are greater predictors of diabetes using a dataset of 230K+ patient records.
- Employed advanced data wrangling (imputation, encoding, outlier detection) and addressed class imbalance with SMOTE.
- Developed ML algorithms (Random Forest, Logistic Regression, KNN) with 5-fold cross-validation to predict diabetes risk.

Work Eligibility: US Citizen