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.
- Filmed and editing viral marketing content, generating multiple videos with millions of views each.
- Designed and approved branded merchandise, contributing to increased brand recognition and sales.
- 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, 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
- **Databases & Cloud**: MySQL, MongoDB, Pinecone, AWS, Vector Databases
- **Language Skills:** English and Russian native speaker | Intermediate proficiency in Spanish

PROJECTS/ HACKATHON

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

- Created An AI-powered multimodal video analysis system built with FastAPI and JavaScript that enables users to process YouTube videos for interactive chat, timestamped navigation, and visual content search. Utilizes OpenAI GPT-4 for natural language processing, Google Gemini for visual understanding, FAISS for vector similarity search, and PyTube for video processing.

Lock-in AI VS Code Extension | github.com/adonitakos/STJHacks2025 **April 2025**

- Collaborated on a VS Code extension built with Next.js, React, and TypeScript that won 1st place of the Headstarter Track at St. John's Hacks 2025 hackathon. Developed functionality to analyze entire codebases & deliver inline quality feedback via OpenAI API, utilizing Tailwind CSS for styling and Radix UI components for the interface.

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

Research Assistant **- Medicaddie: Electronic Health Records (EHR)** **October 2024 – January 2025**

- Collaborated on user interface redesign of an EHR system for healthcare professionals utilizing PHP, HTML, and CSS.

Student Performance Analytics | github.com/allanilya/StudentPerformanceAnalytics) **December 2024**

- Developed a Jupyter Notebook for analyzing student performance trends using libraries such as Pandas, Plotly, and scikit-learn for seamless data preprocessing, visualization, and model implementation.
- Applied ML algorithms such as Random Forest, Decision Trees, and Naïve Bayes to predict student academic performance based on factors such as attendance, alcohol consumption, internet access, etc.
- Built a user-friendly dashboard utilizing the Dash framework to allow educators to explore further insights, enabling data-driven interventions for improving student success.

Codify AI (Dr. Fazel Keshtkar): February 2024 – Present

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Built React-based adaptive learning platform featuring persistent practice questions with localStorage state management, real-time progress tracking, and UTC-normalized timestamp handling across timezones

• Implemented multi-tool agentic system using LangChain for dynamic content generation, code execution, and web search, enabling context-aware tutoring responses

• Engineered secure backend with Flask, including user authentication, rate limiting (3 attempts/day), and DynamoDB single-table design for efficient data access