

Rahim Askarov

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EDUCATION

Bachelor of Science: Computer Science, Economics
University of Massachusetts Amherst

09/2022 - 05/2026
Amherst, MA

TECHNICAL SKILLS

Languages: C/C++, Python, Java, Swift, JavaScript, TypeScript, C#, MATLAB, PHP, CSS, Bash, SQL, Postgres, R

Frameworks & Tools: React.js, React Native, TensorFlow, PyTorch, scikit-learn, NumPy, Keras, Pandas, Spring Boot 3, Hibernate, Gradle, Swagger UI, Xcode, Azure, Kafka, Django, Flask, SQLAlchemy, MongoDB, D3.js

Machine Learning: Neural Networks, CNN/RNN, Transformers, Linear/Logistic Regression, Feature Engineering, Diffusion Models

Software Engineering: Git, Gitlab, Docker, REST APIs, Microservices, Agile Development, Spring Security, CI/CD (GitHub Actions), Unit Testing (JUnit, PyTest), API Security (JWT, OAuth2, BCrypt), Kubernetes, Postman, AWS

WORK EXPERIENCE

Machine Learning Engineer Intern

Boston, MA

Rightance Healthcare Inc. | *Pandas, Transformers, Scikit-learn, NLP*

08/2025 - Present

- Contributing to the development and evaluation of AI models for healthcare and clinical imaging applications.
- Processed and cleaned 120,000+ medical images, implementing augmentation and pipelines that reduced noise error by 22%.
- Developed and benchmarked Transformer-based architectures and ensemble models, optimizing inference time by 30% while maintaining precision.

AI Engineer / Data Science Intern

Baku, Azerbaijan

Kapital Bank

05/2025 - 09/2025

- Developed AI-powered STT/TTS services with Azure Cognitive Services, enhancing voice banking accessibility for 100K+ users.
- Built end-to-end machine learning pipelines for audio data collection, preprocessing, and annotation to enhance training quality; incorporated feature engineering and anomaly detection techniques to boost model accuracy in speech recognition.
- Created a real-time voice assistant leveraging Azure OpenAI's GPT-4 for conversational banking. Enabled STT/TTS and reduced customer service response time by 20% through faster query handling.

Software Engineer Intern

Baku, Azerbaijan

Kapital Bank

05/2024 - 09/2024

- Engineered and optimized 15+ Spring Boot microservices supporting 1M+ active users, improving overall system response times by 30% through efficient service architecture and caching.
- Refactored SQL schemas and queries, improving data retrieval latency and transaction throughput across critical banking services.
- Implemented JWT authentication and integrated Swagger UI, strengthening API security and developer efficiency.
- Improved software quality and delivery by enhancing test automation and CI/CD pipelines. Enforced coding standards and best practices (fixed 50+ code issues) to ensure maintainable, production-ready code in an Agile team environment.

Software Engineer Intern

Baku, Azerbaijan

AZZA CJSC

05/2023 - 09/2023

PROJECTS

AZZA CJSC Mobile App | *React Native, Java, Redux, Firebase*

- Lead Developer for a mobile app enabling customers to browse and purchase wines from AZZA's stores. Designed the app's architecture and UX to streamline the wine selection and checkout process for thousands of in-store and online users.
- Built an intuitive React Native interface with Redux and integrated Firebase Firestore for real-time inventory sync, improving product discovery and reducing data delays by 40%.

RizzTheGrid | *Python, Flask, PyTorch, Next.js, Azure*

- Developed a platform that predicts hourly carbon intensity and renewable energy availability across U.S. regions using PyTorch-based time-series forecasting models. Provided actionable insights into grid cleanliness for consumers and utilities.
- Implemented a reinforcement learning-inspired scheduling engine that recommends optimal electric vehicle charging times and grid usage periods, reducing reliance on fossil-fuel power by up to 4% in simulation scenarios.
- Deployed model retraining pipelines on Azure cloud, enabling the system to learn from new data and improve accuracy over time.

RESEARCH

Undergraduate Research Assistant — IMF Political Economy Research, UMass Amherst

10/ 2025 – Present

Supervisor: Prof. Lawrence King

- Conducted empirical research on IMF structural adjustment programs and public health outcomes, analyzing cross-country panel data to assess impacts on healthcare spending, mortality, and health system capacity in low- and middle-income countries.
- Built and evaluated **econometric models (fixed effects, difference-in-differences)** to study causal relationships between IMF conditionality, fiscal austerity measures, and social sector outcomes.