

Sabbir Ahmed Saqlain

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LeetCode: leetcode.com/u/Saqlain_Ahmed

Objective

Design and develop intelligent, secure, and scalable AI systems by integrating iOS development expertise with research experience in cryptography, blockchain, and machine learning. Seeking an AI/ML Engineer role to apply deep learning, model optimization, and secure computing techniques in building reliable and privacy-preserving intelligent solutions.

Education

New Jersey Institute of Technology (NJIT) **Jan 2023 – Dec 2025(expected)**

Newark, NJ, USA

Master of Science in Computer Science (GPA: 3.92/4.0)

Thesis: Cloud Data Security, Advanced Machine Learning and Blockchain

Coursework: Data Structures and Algorithms, Cryptography, Big Data, Machine Learning, Advanced Machine Learning, Trusted Computing & Architecture

Rajshahi University of Engineering and Technology (RUET) **Jan 2015 – Aug 2019**

Rajshahi, Bangladesh

Bachelor of Science in Computer Science and Engineering (GPA: 3.48/4.0)

Coursework: Computer Security, Data Structures and Algorithms, Data Mining, Neural Networks, Database Systems, Software Engineering

Research Projects

Predicting ED Patient Outcomes (MIMIC-IV ED) | NJIT **Jan 2024 – Dec 2024**

- Built an end-to-end ML pipeline to predict ED patient mortality using MIMIC-IV data
- Performed data cleaning, feature engineering, and cohort clustering (PCA + K-Means)
- Trained and benchmarked classifiers; selected Random Forest achieving ~97% accuracy
- Addressed class imbalance with SMOTE and used SHAP for model interpretability
- Provided insights to support early-risk triage and clinical decision making.

Retrieval-Augmented Generation (RAG) System **Dec 2025**

- Built a local RAG pipeline using Ollama + Llama 3.1 (8B) with FAISS vector search
- Implemented PDF/TXT/MD ingestion, text chunking, and semantic retrieval with nomic-embed-text embeddings
- Developed a FastAPI service for context-aware question answering using retrieved document chunks.

Hybrid Blockchain Access Control System | NJIT **Jan 2023 – Dec 2025**

- Designed a hybrid blockchain–cloud storage architecture for supply chain data
- Implemented decentralized access control with real-time revocation

- Enhanced scalability for ML-driven analytics over encrypted datasets
- Tools: Ethereum, Hyperledger Fabric, MySQL, Docker, AWS

Malicious Android Application Detection

IEEE 2019

- Published an IEEE paper on efficient detection of malicious Android applications using machine learning
- Classification algorithms to analyze permission patterns and app behaviors
- Improved detection accuracy and explainability of model predictions.
- Tech: Python, Scikit-learn, Pandas, Android API

Experience

Optimizely — Software Engineer II (iOS)

Sep 2022 – Dec 2022

- Delivered a B2B commerce mobile application
- Collaborated with analysts to ensure compliance and secure architecture
- Testing, documentation, and user support
- **Tech Stack:** iOS, Xamarin, C#.

UAPY – UCB Fintech Company Ltd.— Software Engineer (iOS)

Jul 2021 – Aug 2022

- Developed a financial services app (1M+ active customers) with strong authentication and secure payment protocols
- Integrating ML-based face detection
- Implemented cryptographic data protection mechanisms to secure user transactions

Brain Station 23 — Associate Software Engineer (iOS)

Sep 2019 – Jul 2021

Citytouch [↗](#) (The City Bank Limited)

- Refactored code with enhanced encryption for secure transactions
- Rewriting ~40% of Objective-C codebase to improve stability and scalability

UNET Enterprise Banking (UCBL) [↗](#)

- Enterprise banking solution for corporate clients
- Implementing secure transaction flows and backend with secure REST API integration

UCB UNET (UCBL) [↗](#)

- Developed a retail banking app integrating custom secure authentication modules
- Custom design pattern for efficient UI/UX performance

AB Direct Internet Banking (AB Bank) [↗](#)

- iOS app in Objective-C using the MVVM design pattern
- Secure REST APIs for backend connectivity

Modhumoti Digital Banking [↗](#)

- MVVM design with XIB-based custom UI components
- Secure REST APIs for real-time account services

Tech Stack: Swift, Objective-C, MVVM/MVVM-C, REST APIs, WebRTC, WebSocket

Skills

- AI & ML: Supervised Learning, Deep Learning, Model Optimization, CoreML, TensorFlow Lite, Scikit-learn
- Cryptography: Symmetric/Asymmetric Encryption, Key Management, Access Control, Secure Multi-Party Computation, Cloud Security, Authentication Protocols, Mobile Security
- Programming: C/C++, Python, Go, Swift, Objective-C
- Blockchain & Distributed Systems: Ethereum, Hyperledger Fabric, Consensus Protocols
- Tools: GitHub, GitLab, Docker, AWS, Agile/Scrum

Others

AI Text Recognizer (iOS App in App store)

Jan 2022 – Ongoing

- Built an iOS app for real-time handwriting/printed text OCR using Vision/CoreML
- Supports multi-language recognition and quick export
- Published and maintained on the Apple App Store

Live Face Detection Library

Aug 2022

- Developed a live face detection module for customer registration using CoreML
- Collected and labeled a custom dataset to train an on-device CoreML model
- Trained and optimized the model for real-time performance and accuracy
- Integrated the trained model into an iOS application for seamless user verification during registration

Research Publication: IEEE- Malicious Android Application Detection Using ML

Aug 2019

Internship: Microsoft Young Bangla

Apr 2018(3 Days)

Hobbies: Cybersecurity research, Capture the Flag (CTF) challenges