

Sabbir Ahmed Saqlain

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Education

New Jersey Institute of Technology (NJIT)

Jan 2023 – Dec 2025

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

Experience

Chakrie.com (Startup)— Engineering Manager (Consultant)

Jan 2026 - Ongoing

- Led engineering planning and development for the Chakrie.com platform
- Managed task prioritization, code review, deployment, and issue resolution
- Collaborated with business and product teams to improve reliability and user experience

Tech Stack: AI Agent, LLM, Web(Python), VPS, AWS, PostgreSQL, iOS, Android

KONASL — Software Engineer II (AI/ML, Security, iOS)

Apr 2026 - Ongoing

- Built an iOS NID capture framework with real-time guidance, LLM based OCR extraction
- Designed secure liveness, compliant data handling, and scalable GPU-backed inference
- Lead testing, API integration, production deployment, and documentation.
- Developed and maintained iOS features for a large-scale fintech mobile app
- Integrated secure authentication, payment flows, and REST API-based backend services
- Improved app stability, performance, and user experience through debugging and code optimization

Tech Stack: LLM, Swift, MVVM/MVVM-C, REST APIs, iOS, AWS

New Jersey Institute of Technology (NJIT)

Jan 2023 – Dec 2025

Graduate Teaching Assistant

- Assisted the instructor with course logistics (posting materials, announcements, and grades), and responded to student questions promptly
- Supported students with problem solving and coding/debugging
- Held office hours and provided timely feedback by grading assignments, projects, quizzes/exams using clear rubrics

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

Other Projects (iOS App in App store, Team Lead)

AI Text Recognizer

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

Smart Tutor - AI Powered Learn

Jan 2024 – Ongoing

- Smart Tutor is an AI-based study app for instant homework help.
- It solves math, science, and writing problems with step-by-step answers.
- Users can scan questions and generate quizzes instantly.

AI Art: Artify Image & Video

Jan 2024 – Ongoing

- AI Artify is an AI-powered image and video generation app.
- Users can create artwork, enhance photos, and transform videos with custom styles.

BreakGame: Block Brick Break

Jan 2022 – Ongoing

- BreakGame is a fast-paced brick-breaker arcade game for iOS.
- Players control a paddle to destroy blocks across progressive levels.
- The game features power-ups, increasing difficulty, and smooth physics.

Kids Math Example Practice

Jan 2022 – Ongoing

- Kids Math is an educational app helping children practice basic arithmetic.
- It offers addition, subtraction, multiplication, and division exercises.
- The app generates unlimited examples with playful, kid-friendly visuals.
- Designed to build confidence and improve early math skills.

BrainGrid: Puzzle Challenge

Jan 2024 – Ongoing

- BrainGrid is a logic-based puzzle game that challenges players with grid-solving tasks.
- It features progressively harder levels designed to boost reasoning skills.
- Players connect patterns, solve sequences, and complete brain-training challenges.

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

Blockchain Based 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

Tech Stack: Ethereum, Hyperledger Fabric, MySQL, Docker, AWS

Malicious Android Application Detection

IEEE 2019

- Published an IEEE paper on efficient detection of malicious Android applications using
- Classification algorithms to analyze permission patterns and app behaviors
- Improved detection accuracy and explainability of model predictions.

Tech Stack: Python, Scikit-learn, Pandas, Android API

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

Skills

- AI & ML: LLM, RAG, 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

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