

# Ahsanul Kabir

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## Education

- Grand Valley State University**, Grand Rapids, MI May 2027  
*MS in Applied Computer Science*
- Relevant Coursework: Distributed Systems, Machine Learning Operations, Secure Software Engineering
- Bangladesh University of Engineering and Technology**, Dhaka, Bangladesh Feb 2021  
*BS in Computer Science and Engineering*
- Relevant Coursework: Computer Security, Fault-Tolerant Systems, Pattern Recognition, Artificial Intelligence
  - Class Representative - Class of 2021

## Professional Experience

- Graduate Research Assistant**, GVSU College of Computing, Grand Rapids, MI Aug 2025 – Present
- Deploy a machine learning based plant disease detection platform using AWS EC2, Nginx, and Cloudflare.
  - Integrate AWS S3 and Aurora PostgreSQL to enable image uploads, model execution, and result archiving.
  - Implement new features in Flask and Nuxt to expand platform functionality.
- Senior Engineer**, bKash Limited, Dhaka, Bangladesh Feb 2023 – Aug 2025
- Contributed to and maintained bKash's Payment Gateway, processing over 410k daily transactions. Used Java, Python, AWS Cognito, AWS Lambda, DynamoDB, and CloudWatch.
  - Redesigned the payment modules of the gateway to an object-oriented microservice architecture from serverless Lambda functions, reducing response time by 50%. Used Spring WebFlux, Redis, API Gateway, and Locust.
  - Migrated the Merchant Notification system to a reactive module, enabling it to handle 7,000 requests per minute while reducing EC2, DynamoDB, and S3 costs.
  - Enhanced system security by implementing a REST API request-response cipher mechanism and WAF rules.
  - Collaborated with cross-functional teams to deliver high-quality products, actively participating in Agile ceremonies including scrums, refinements, and retrospectives.
  - Built CI/CD pipelines with GitHub Actions to run tests on pull requests and deploy changes to a test server.
  - Automated local development environment setup using Terraform and AWS CLI, eliminating manual setup errors.
- Software Engineer**, Reve Systems, Dhaka, Bangladesh Jan 2022 – Feb 2023
- Junior Software Engineer** Jul 2021 – Dec 2021
- Developed admin and customer portals for a telecommunications company. Used Spring Boot, Struts, and MySQL.
  - Implemented BalanceManager using Redis Pub/Sub for call and SMS authorization, enabling a transition from a postpaid to a more cost-effective prepaid business model.
  - Automated the call rate entry process by developing an email-driven solution, eliminating manual data entry errors, reducing associated operational costs.
  - Integrated Elasticsearch and Kibana for efficient log monitoring and analysis.
  - Maintained and updated documentation for clients, testers, and the product team.

## Technical Skills

<b>Languages</b>	Java, Python, C#, SQL, C, Bash, JavaScript
<b>Frameworks &amp; Libraries</b>	Spring Boot, Flask, .NET, Node.js, Nuxt.js
<b>Databases</b>	DynamoDB, Redis, MySQL, PostgreSQL
<b>Cloud (AWS)</b>	EC2, SNS, S3, Lambda, Cognito, WAF, API Gateway, CloudWatch, Aurora
<b>DevOps</b>	Docker, Kubernetes, Jenkins, Terraform, Nginx
<b>Tools</b>	Git, MATLAB, Linux, Postman, JIRA, Maven, GraphQL, LATEX, Figma
<b>Monitoring</b>	New Relic, ELK Stack, JDK Mission Control

## Projects

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### **Tokenized Checkout Payment, bKash Limited**

A fintech solution that helps merchants accept payments easily while giving bKash users a simple, convenient way to pay online through websites or mobile apps. Implemented merchant-facing transactional APIs and customer-facing payment validation APIs.

### **Edge Forestry, GVSU College of Computing**

An AI-powered system that analyzes imagery to detect early signs of plant infections by identifying subtle variations in foliage color, and canopy texture, enabling faster and more accurate treatment decisions. Deployed the platform on AWS, and currently working to incorporate satellite imagery analysis for broader forest health monitoring.

### **Instant Payment Notification, bKash Limited**

A real-time notification system that keeps bKash merchants instantly updated on transactions. Designed and implemented the complete module in AWS SNS and reactive Spring WebFlux.

### **Airtel Advantage, Reve Systems**

A platform that makes it easy for global telecom carriers to partner with Airtel, offering services like international voice, SMS, and DID, with reporting and call-rate APIs to streamline operations. Implemented call-rate and reporting related APIs.

## Accolades

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### **Semi Finalist**

Dec 2025

GR Deep Tech Pitch Competition, Grand Rapids, MI

### **First Place: SentinelOne Purple AI ThreatOps Challenge**

Oct 2025

GrrCON Cyber Security Summit 2025, Grand Rapids, MI

### **Third Place: SentinelOne AI SIEM ThreatOps Challenge**

Oct 2025

GrrCON Cyber Security Summit 2025, Grand Rapids, MI

### **Star Award, H2 - 2023**

May 2024

Product & Technology Division, bKash Limited, Dhaka, Bangladesh