

Driven by a passion for innovation and learning new technologies, I excel in leveraging fullstack and machine learning systems to enhance business efficiency and achieve impactful results. With a Masters in Computer Engineering and over 4 years of experience as a Software & Data Engineer, I've crafted and implemented robust SaaS systems, fine-tuned ML processes, and translated complex data into actionable insights that have improved customer experiences and business operations. I'm committed to continuously pushing the boundaries of what's possible, always striving to deliver solutions that make a real difference.

EXPERIENCE

Full-stack Developer, *Freelance (Calgary, Canada)*

2023

- Developed ETL processes to handle larger volumes of booking data, enhancing data processing efficiency by 30%.
- Built a dynamic pricing system that adjusts prices based on demand, upping revenue by 25% during peak seasons.
- Created an intuitive and mobile responsive web application using Flutter, enhancing mobile engagement by 50%.
- Analyzed interaction data to identify trends, leading to 1.5x mobile engagement through targeted enhancements.
- Implemented accounts recovery and backup procedures, reducing data loss incidents by 40%.

Software Development Intern, *Cerence Inc. (Montreal, Canada)*

2022

- Contributed to internal swipe text input tool for IVI (in-vehicle infotainment) interface in Java for Lucid Motors.
- Fine-tuned prediction algorithms to improve swipe input accuracy for varying dashboard screen sizes.
- Documented Linux layer build for an IVI system for VinFast, reducing errors by 20% during deployment.
- Corresponded operations and updated with various project teams to gain insight on ASR for automotive.
- Automated manual language pack parsing tasks with Python, to improve ASR system design time.
- Collaborated with an international cross-functional NLP team to integrate custom vehicle-specific AI configurations.

Software Engineer, *Stellar Vision (Remote - Sydney, Australia)*

2020 - 2022

- Designed full-stack services using Node, and HL7 enabling 2x faster clerical workflows for healthcare workers.
- Developed a data visualization tool using D3.js & MQTTX to track and optimize patient needs and requests.
- Engineered user-friendly secure video call app for mobile and Android TV-based devices for senior home clients.
- Integrated & deployed vision models to monitor and categorize patients' medical imagery documents.
- Overhauled 90% of interactive survey analytics platform from legacy PHP to modern performant JavaScript.
- Provided app troubleshooting support and administrative backend assistance to clients, resolving 85% of issue tickets.
- Created a granular permission administration system to configure features for various user groups.

Software Developer, *Challan.XYZ (Dhaka, Bangladesh)*

2019 - 2020

- Built the ReactJS B2B procurement platform that streamlined data entry speed on product stock by 200%.
- Developed API-driven pipelines to monitor and analyze product delivery performance, increasing efficiency by 2x.
- Created and updated documentation for internal Linux system processes, policies, security and licensing.
- Documented backend comprehensively, such that new developers can modularly stack features onto the platform.
- Created a custom tool for real-time procurement data updates, enhancing sales analytics accuracy.

SKILLS

- **Languages & Scripting:** Java, Python, JavaScript, Dart, C++, C#, Kotlin, Swift, R, PHP, Bash, SQL, HTML, CSS
- **Fullstack:** Flutter, Firebase, Xcode, Node.js, Express, Flask, Django, React, Bootstrap, JQuery, WebRTC, Next.js
- **DevOps:** Jenkins, Docker, Terraform, Ansible, NGINX, Git, SVN, REST API, SOAP, Bcrypt, CI/CD, Postman
- **Cloud:** AWS, GCP, Azure, S3, BigQuery, Redshift, Apache Spark, Kafka, Hadoop, Hive, MongoDB, PostgreSQL
- **AI, ML & Data:** TensorFlow, PyTorch, NLP, OpenCV, Pandas, Tableau, Power BI, Excel, LLM, ChatGPT
- **System & Tools:** MySQL, MQTT, IoT, NGINX, Unity, Vuforia, Latex, Trello, Confluence, Jira, M365, VMWare
- **Platforms:** Windows, MacOS, Android, iOS, Linux, Raspberry Pi, Arduino
- **Admin:** Scrum, Agile, Gantt, Multithreaded Architectures, Synchronization Principles, Debugging Tools
- Excellent debugging skills and experience using tools to help debug
- Clear communicator, effectively bridging technical and client needs.
- Approachable, culturally aware, and positive in diverse team environments

EDUCATION

Master of Engineering, Electrical & Computer Engineering

2021 - 2023

The University of Calgary. *Calgary AB, Canada*

- Concentrated on Dependability & Reliability of Software, Data Mining & Machine Learning, Agent-based Automation, Cryptography & Number Theory, Engineering Ethics & Law, and Climate Adaptation in Software Engineering.
- Studied and evaluated NLP-based approaches to the generation and coverage of evolutionary test cases.
- Worked on segmentation and deskewing pipeline for images of signboards in low visibility weather using UNet.
- Graduate Teaching Assistant: Supported students in understanding programming course materials, provided constructive feedback, helped debug, and evaluated assignments, enhancing learning outcomes.

Bachelor of Science, Computer Science & Engineering

2015 - 2019

North South University. *Dhaka, Bangladesh*

- Received first-class degree, concentrated on Machine Learning, Computer Vision and Software Engineering Design.
- Researched the application and viability of Pixelart Style Transfer using Generative Adversarial Network with PyTorch and Romanized Transcription from Bangla Speech Spectrograms with CRNNs and Librosa.
- Acted as Volunteer Instructor at ACM SIGAPP student chapter. Conducted game development workshops at alma mater. Covered 2D/3D graphics, game logic programming, and deployment; empowering participants to create and play their fully functional games within three sessions.

CERTIFICATIONS

Career Essentials in Generative AI

Microsoft and LinkedIn - August 2024

Skills: Generative AI, Artificial Intelligence (AI), Computer Ethics

Career Essentials in Sustainable Tech

Microsoft and LinkedIn - August 2024

Skills: Sustainable Business Strategies, Digital Sustainability, Green Jobs, Sustainable Systems

JavaScript Algorithms and Data Structures

freeCodeCamp - August 2023

Skills: Data Structures, JavaScript, Algorithms

OTHER PROJECTS

CashIQ - iOS App, Manush Tech

- Engineered iOS app that promotes responsible financial habits with family allowance and chore management.
- Used Flutter, Firebase, FCM, OTP, and HiveDB for a secure and efficient UX app available on iOS App Store.

SVSE - Internal Survey Engine, Stellar Vision

- Developed a survey distribution system with survey CRUD, user permissions and direct web embedding.
- Designed and implemented a modular editor interface that varies per user based on granular admin-granted permissions.

Golu Molu - Android Game, M360 Wellness

- Created a health-conscious Android game for a fitness and beauty company, available on the Google Play app store.
- Utilized Unity, C#, Blender, and Krita to code game logic and create art assets, following game development practices.

Kastles and Katapults - AR Multiplayer Physics Game

- Created an augmented reality physics-based block game with local multiplayer functionality for Android devices.
- Built mechanics, assets and code using Unity, C#, Blender, Krita, Vuforia, ARCore, and UNet.

WAConDA - WhatsApp Conversation Data Analysis

- Exported, extracted, filtered, and parsed WhatsApp chat dataset spanning 5 years for analysis in Python.
- Utilized grouping and statistical algorithms to derive insights into the nature and patterns of the conversation.