# JAWAD AZIZ KHAN

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A skilled, respectful, and proactive Software Engineer with theoretical and practical knowledge of mobile and full-stack application development. I'm passionate about problem-solving and enhancing user experiences, and I strive to create solutions that benefit people and the environment. With ~5 years of experience in Flutter, Node.js, Python, and REST API, I have a powerful drive for designing, building and deploying secure, reliable, multi-platform systems.

## EXPERIENCE

**Full-Stack Developer,** *Shampan Tours (Calgary, Canada)*                                                    *2023*
- Developed and maintained tour booking backend using Node.js, and MongoDB, increasing booking 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%.
- Reduced onboarding time by 30% through detailed project documentation and standardized code guidelines.

**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.
- Tweaked and debugged prediction hot zones 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 team to integrate custom vehicle-specific Android configurations.
- Learned about continuous ASR input and conversation context retention for built-in IVI voice assistants.

**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 caretaker request system that leverages MQTTX to better visualize & optimize patient needs and requests.
- Engineered user-friendly secure video call app for mobile and Android TV-based devices for senior home clients.
- Implemented a notification feature using Flutter and Firebase Cloud Messaging to push real-time alerts.
- Overhauled 90% of interactive survey analytics platform from legacy PHP to modern performant JavaScript.
- Built modularity for posting public surveys such that they can be embedded with HTML tags or a QR code.
- Created a granular permission administration system to configure features for various user groups.

**Software Engineer,** *Challan.XYZ (Dhaka, Bangladesh)*                                                      *2019 - 2020*
- Built the ReactJS B2B procurement platform that streamlined data entry speed on product stock by 200%.
- Set up an automated API workflow to streamline product delivery by 2x and monitor performance metrics.
- Integrated live procurement updates using Twilio to keep the customer-side dashboard up-to-date.
- Communicated with clients to troubleshoot and improve the platform from feedback, upping user satisfaction by 70%.
- Developed a custom order scanning tool using Flutter for real-time procurement updates, and sales analytics.

## SKILLS
- **Languages:** Java, Python, Javascript, Dart, C++, C#, Kotlin, Swift, R, PHP, Bash, SQL, HTML, CSS
- **Mobile:** Flutter, Firebase, FCM, APN, Xcode, React Native, Gson, Hive, Glide, ARCore, Provider, Sentry
- **Full-stack Web:** Node.js, Express, Flask, Django, React, JBoss, Bootstrap, JQuery, GCP, AWS, WebRTC, Bcrypt
- **System/ML:** Git, MySQL, MongoDB, MQTT, IoT, NGINX, Latex, Agile, Trello, REST API, SOAP, CI/CD, Postman, NextJS, Confluence, Jira, SVN, AI, ChatGPT, LLM, OpenCV, NLP, Tensorflow, Pytorch, Pandas, Unity, Vuforia
- **Platforms:** Windows, MacOS, Android, iOS, Linux, Raspberry Pi, Arduino
- Data collection, analysis, and reporting with JS, Python, and Excel
- Well-versed in task management under Scrum, Agile, and Gantt
- Understanding of multithreaded architectures and synchronization principles
- Excellent debugging skills and experience using tools to help debug
- Practical knowledge of AI, Machine Learning, API and DevOps
- Effective at communicating requirements, issues, and solutions with users/clients/customers
- Approachable and sociable with diverse ethnicities and cultures

## 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 evolutional 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.

## 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.