Brashan Mohanakumar

647-200-3485 bmohanak@uwaterloo.ca linkedin.com/in/brashan github.com/brashanm brashanm.github.io

Education

University of Waterloo — Waterloo, Ontario
Bachelor of Computer Science — September 2021 – April 2026
Relevant Courses: Data Structures, Algorithms, Object-Oriented Software Development, Operating Systems

Technical Skills

Languages: JavaScript, TypeScript, Python, Swift, C++, C, HTML, CSS, SQL
Mobile Technologies/Frameworks: SwiftUI, UIKit, SwiftData, XCTest, Core Image, Core ML, Core Data, Combine
Web Technologies/Frameworks: Angular, React, MongoDB, Express, Node.js, GraphQL, Redux
Data Science Tools: Pandas, NumPy, Scikit-learn, Matplotlib, Apache Spark, Selenium, Seaborn
Tools: VS Code, XCode, Git, Firebase, BitBucket, Docker, Kubernetes, Figma, Jupyter, Crashlytics, AWS, Postman

Experience

Full Stack Developer — September 2022 – August 2023
TTD-Kicks — Toronto, Ontario
- Led the end-to-end creation, development, and deployment of a high-yielding eCommerce web application, resulting in a revenue stream exceeding $70,000 and a clientele exceeding 350 satisfied customers
- Crafted an immersive and responsive user interface using React, Redux, and TypeScript, elevating user engagement and optimizing navigation flow to deliver a seamless and intuitive purchasing experience
- Pioneered a robust back-end infrastructure using Node.js, Express, & MongoDB managing intricate inventory data, fine-tuning platform responsiveness, and bolstering data security protocols

Software Developer — January 2023 – April 2023
TutorBright — Toronto, Ontario
- Led the design and development of the resources page on the main web application, leveraging MongoDB, Express, Angular, Node.js, and GraphQL, benefiting a user base of over 60,000 students and tutors
- Enabled seamless file retrieval, search, preview, & download functions through a server API, opting for bulk loading instead of lazy loading, leading to a 33% reduction in search & retrieval latency compared to the previous system
- Optimized student program management by introducing a dedicated programs tab within client profiles, complete with options for program viewing, editing, and removal

Data Analyst — May 2022 – August 2022
Ace Beverage Group Inc. — Toronto, Ontario
- Designed and implemented a company-wide solution to automate sales data pulls and data entries using Python, NumPy, Pandas, and Selenium resulting in significant time savings and increased accuracy
- Deployed Python scripts on a Raspberry Pi to automate data entry tasks on a weekly basis
- Improved efficiency by eliminating manual data manipulation and ensured consistent and reliable updates to the database, resulting in a 75% reduction in manual task time and 88% decrease in data entry errors

Projects

Mount Progress App — Source Code + Demo
- Developed a CRUD iOS application using Swift, SwiftUI and Firebase allowing users to track their progress for their fitness goals through regular progress pictures uploads and documenting weight changes & any relevant notes
- Implemented robust user authentication with Firebase Auth for secure account creation, seamlessly connecting to Firebase Storage for photo storage and Cloud Firestore for data management
- Executed thorough unit testing protocols, resulting in a 20% decrease in app crashes post-release
- Successfully launched app on the Apple App Store with 30+ users & an overall customer satisfaction rating of 5/5

Abelese App — Source Code + Demo
- Developed a user-friendly iOS app in Swift & SwiftUI, integrating Firebase & a REST API for real-time translation of The Weeknd's song lyrics into the user's chosen language, amplifying global accessibility to the artist's music
- Populated a Cloud Firestore database with 100+ songs by The Weeknd and seamlessly connected it to the app, leveraging it to enable real-time translation of his lyrics to over 30 languages through the LibreTranslate API
- Implemented the MVVM architectural pattern for enhanced code organization and maintainability

SAPA (Sports Analytics Portfolio Application) — Source Code
- Designed and implemented Python solutions to provide analytical data insights and visualization of NBA statistics
- Utilized NumPy and Pandas to perform data analysis on player and team statistics from an NBA API
- Visualized data using Seaborn and Matplotlib to communicate complex analytical findings on a Jupyter Notebook