TAJ MAUN KAMAL CHOWDHURY

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EDUCATION

University of Chittagong, Chittagong, Bangladesh
- Bachelor of Engineering in Computer Science and Engineering
- **Thesis:** Bengali number plate detection using contour properties of locally important regions.

PROFESSIONAL EXPERIENCE

Senior Software Engineer | Wearable Solution Lab, Samsung Research | Dhaka, Bangladesh   **Jan 2021 - present**
[Java, Rest Api, Android, Kotlin, C++, RTOS]
- Led the development of wearable technologies, including Smart Rings, Bands, and Smartwatches.
- Worked on Wearable Manager applications for Android, iOS, and Windows platforms.
- Defined data communication protocol for multiple RTOS device features, completing development with nearly 0% issue reporting.
- Conceptualized solution for client-server synchronization of firmware-over-the-air feature by handling all success and fail cases.
- Developed location-based service to record location data from phones by maintaining unique session storage.
- Implemented a library for large health data conversion between formats with 20% increase of total data processing performance.
- Built a tool to test conversion of health data between formats in reverse manner to ensure integrity and accuracy of the process.
- Re-wrote clumsy codebase to reduce bugs and improve readability,achieving nearly 80% unit test coverage for respective features.
- Contributed in multiple innovative project ideas, patentable concepts and feature suggestions to improve the user experience.
- Coached over 7 team members to reach professional levels of software competency test by identifying areas of improvement.

Software Engineer | Wearable Solution Lab, Samsung Research | Dhaka, Bangladesh   **Jul 2018 - Dec 2020**
[iOS, Swift, Objective-C, C#, UWP, Kotlin]
- Refactored old codebase, grasped ownership of key features and resolved hundreds of issues of iOS wearable manager project.
- Improved user interaction by implementing critical user interfaces for wearable manager project,impacting over 200 million users.
- Built log dump feature to collect logs of rtos device and shorten log collection time by 30% excluding trifling data exchange.
- Implemented firmware-over-the-air feature from scratch for windows buds manager within tight schedule, ensuring integrity.
- Developed functionality to regulate behavior on wearable for apps it receives the notifications through notification center service.
- Participated in the implementation of search feature and optimization of search response time for the wearable manager.

Junior Software Engineer | Brain Station 23 Ltd. | Dhaka, Bangladesh   **Mar 2018 - Jul 2018**
[C#, .net, JavaScript, nopCommerce, Angular]
- Developed and customized plugin with unit testing resulting in 25% decrease in bugs.
- Accomplished nop-commerce certification within short time with top 10% score.

TECHNICAL SKILLS

- Java,C++, JavaScript, Swift, Objective-C, C#, Kotlin
- Xcode, Visual Studio
- iOS, Android, UWP, .net, Angular, SQLite
- Git, Gerrit, Jira, SourceTree, QuickBuild, Maven

ACHIEVEMENTS

- **Samsung R&D CTO Award** : Outstanding contribution to RTOS-based FIT project.   **Jun 2024**
- **Samsung Excellence Award** : Key contributor to RTOS-based Smart Ring development.   **Dec 2023**
- **Samsung Excellence Award** : Maintained almost zero issue ratio in WearOS project.   **Jun 2023**
- **Samsung Software Competency Test(Top 26%)** : Achieved professional-level ranking.   **Mar 2022**
- **1st Place in Brain Station Star Coder Contest** : Arranged to hire fresh graduates.   **Nov 2017**
- **1st Place in CodeSignal Global Algorithmic Contest** : Ranked 1st among 50,000+ participants.   **Jan 2015**
- **3rd Place in IIUC Programming Contest 2013** : Organised by International Islamic University Chittagong.   **Jan 2013**
- **HackerRank Algorithm Rating** : 2301(top 0.75%): Ranked among the top 0.75% globally.   **Feb 2012 - Sep 2017**
- **Chittagong University** Merit Scholarship   **Mar 2011**

RESEARCH EXPERIENCE

DOI: A method to identify sepecific gesture using Smart Ring   **2025**
- Detection of a specific gesture to control other smart devices using Smart Ring is ongoing

Bengali Number Plate Recognition and Segmentation | C++, OpenCV   **2017**
- Detection of bengali number plate using contour properties of locally important region.
- Neural network used for segmentation and intended system filtered number plates with 90% accuracy.

CERTIFICATIONS

- HackerRank, Expertise in solving algorithm problems(Advanced) certificate.
- nopCommerce, Certified nop-Commerce Developer.
- ACM ICPC, ACM ICPC ID.

COMPETITIVE PROGRAMMING

HackerRank
- Algorithm Rating : 2301(top 0.75%)
- National Rank : 17th/ 2300 contestants, Best : 5th
- Global Rank :1421st/182781 contestants
- Ranked in top 1% in 10+ contests.

CodeForces
- Algorithm Rating : 1620(top 5%)

ACM ICPC | National Contests | Others
- Participated in 2 ICPC reginal contests.
- Participated in 100+ national/international level contests.
- Solved in 2000+ problems on various online platforms.

PROJECTS

Galaxy Wearable | Java, Kotlin, Android
- Developed and optimized core features like FOTA, LBS, notifications, and log dump.
- Contributed to protocol development for secure device-app communication.
- Improved user interaction by implementing critical user interfaces for wearable manager project

Samsung Health | Java, Android, SQLite
- Designed SDK for seamless data exchange between Samsung wearables and the Health app.
- Ensured accurate TLV data processing and real-time health synchronization.

Samsung Windows Buds Manager | C#, UWP
- Implemented and optimized FOTA(Firmware-Over-The-Air) functionality.
- Enabled secure and efficient firmware updates for Samsung earbuds on Windows.

Samsung iOS Wearable Manager | Swift, iOS
- Developed device communication protocols, data synchronization, and notification services.
- Ensured seamless connectivity and a smooth user experience for Samsung wearables on iOS.

TALKS

Clean Code Principles, Workshop on Industrial Training, University of Chittagong   2024
- Spoke to 100+ students about writing maintainable and efficient code.

Trends in the Software Industry and Tech Interview Procedures, University of Chittagong   2024
- Spoke to 50+ students about software industry trends and tech interview procedures.

SUPERVISIONS/MENTORING

Industry Mentorship Program   2025
- Kazi Omar Sharif, Final Semester, University of Chittagong
- Mahfuja Yesmin, Final Semester, University of Chittagong
- Shadakur Rahman Tamgid, Final Semester, University of Chittagong

Software Competency Test, Samsung   2023
- Trained and helped 7 engineers to pass samsung software competency test.

Mentor and Judge for System Development, PIHACKS21   2021
- Mentored college level students to develop a system for a hackathon.

Competitive Programming Coach, University of Chittagong   2015
- Took classes and coached students to improve problem-solving skill and get ready for ICPC contests.

VOLUNTEER EXPERIENCE

- **Problem Setter for Algorithmic Contests**, University of Chittagong   2016
- **Algorithmic Problem Author**,CodeSignal   Dec 2015

REFERENCES

- Available Upon request.