Mohammad **Mossa**

SOFTWARE ENGINEER

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Summary

B.Sc. Computer Science graduate from the Technion with over **3 years of professional experience** in **software engineering**, with experience in **real-time systems**, **networking**, and **distributed applications**. Proven track record of **solving complex technical challenges** in both consumer-facing products and internal tooling. Strong foundation in **algorithms**, **operating systems**, and **software architecture**, with practical experience building **scalable systems**, **profiling performance**, and improving **cross-platform reliability**. Actively seeking **junior to mid-level software engineer** positions to contribute and grow within innovative technology teams.

Education

Technion - Israel Institute of Technology
Haifa, Israel

B.Sc. IN COMPUTER SCIENCE
Mar 2020 - Mar 2025

- Key courses: Operating Systems, Algorithms, Data Structures, Object Oriented Programming, Introduction to Computer Networks, Competitive Programming, **Android Development**, **Internet of Things**.
- Worked as an Academic Tutor for courses including Introduction to Computer Science, Combinatorics for CS, and other introductory math and physics courses.
- Dean's Excellence List.

Work Experience

Generalist Software Engineer – Cloud & SDK Integration
The New Face (Remote)

IMMERSIVE E-COMMERCE EXPERIENCES
Jul 2024 - Feb 2025

- Resolved complex **cloud-side race conditions** in a distributed, multi-user environment, improving platform stability.
- Addressed **session pairing inconsistencies** by identifying architectural flaws and proposing resilient solutions.
- Upgraded and integrated the **NVIDIA GeForce Now SDK**, including restoring and validating messaging and communication systems.
- Optimized input handling for mobile users, ensuring compatibility with virtual keyboards and platform constraints.
- Automated SDK integration into build pipelines, eliminating manual steps in CI workflows.
- Customized core plugin behavior to meet product requirements, particularly around loading and streaming user experiences.
- Refactored major components of the codebase to improve **scalability**, readability, and developer onboarding.
- Worked closely with **NVIDIA's developer portal** and related tools to troubleshoot deployment issues.
- Provided cross-functional guidance on system design and SDK adoption.

Junior Software Engineer – Real-Time Systems
HEXWORKS - CI Games (Remote)

LORDS OF THE FALLEN
Dec 2022 - Jun 2024

- Led the development of several real-time and distributed systems, including:
  - **Session Management:**
    - * Redesigned user pairing logic and latency-based matching using custom networking protocols.
    - * Implemented event-specific access control with custom key logic.
    - * Resolved latency and synchronization anomalies across client-server boundaries.
  - **Data Serialization**: Engineered and optimized serialization of complex data types for reliable synchronization.
  - **System Sync**: Improved state consistency for dynamic content loading, user movement, persistence, and user interface.
  - **Diagnostics**: Developed automated tools to detect redundant data synchronization and reduce unnecessary network traffic.
- Utilized performance analysis and data compression tools to optimize bandwidth and CPU usage.
- Proposed and implemented architectural changes that improved **server scalability** and reduced data synchronization overhead.

Software Engineering Intern – Systems & Tooling
NOWWA (Remote)

BULLETVILLE
Jan 2022 - May 2022

- Developed modular systems for camera spectator and replay, aligned with user testing feedback.
- Supported internal documentation and style guide creation to improve **code maintainability**.
- Contributed to user interface logic and system configuration layers.

Projects

Android Application
Technion, Haifa, Israel

Yalla Negev
Summer 2024

- Developed an Android application that aims to collect reliable data about service availability in the Negev region to advocate for government support.
- Implemented key features such as **user registration/authentication**, **data submission**, and push notifications.
- Set up the **Firebase/Firestore database** to enable seamless communication between the app and the backend.
- Designed a user-friendly interface for data collection and visualization.
- Conducted user testing and feedback collection to improve application usability.
- **Technologies:** Flutter, Dart, TypeScript, Firebase & Firestore.
- Project accepted for presentation at **IEEE** (2025).

Internet of Things Project
Technion, Haifa, Israel

Personal Tracking Board
Winter 2024

- Developed an IoT-based personal tracking board that helps track the progress of user-created assignments per board user.
- Implemented **NTP clock synchronization** to ensure accurate timekeeping across the board.
- Handled HTTP requests to the Firestore database to **synchronize data** and display accurate assignment status on the board.
- Utilized **multithreading** on the ESP32 to perform HTTP requests on a separate thread, ensuring the display of the board never hangs.
- **Technologies:** C, ESP32, Arduino, HTTP & NTP Protocols.

Skills

Industry Knowledge	Software Engineering, Distributed Systems, Network Programming, Systems Design, Cloud Integration
Programming	C++, Python, Java, C#, Dart, Squeak/Smalltalk
Software	Git, Perforce, Plastic SCM, TortoiseSVN, Unreal Engine, Unity
Languages	Arabic (native), English (C1), Hebrew (C1)

Honors & Awards

2014	**3rd Place, awarded 50% Technion tuition scholarship**, Madatech, Technion, and U.S. Embassy – National Aerospace Olympiad	*Haifa, Israel*
2017	**Cyber Camp Graduate**, Technion – Israel Institute of Technology	*Haifa, Israel*

Other Activities

- Wrote technical articles on software engineering related topics at wizardcell.com, reaching 1k+ unique visitors monthly.