# 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**

CI Games (Remote)

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BULLETVILLE

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)

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\_

2014

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**

**3rd Place, awarded 50% Technion tuition scholarship**, Madatech, Technion, and U.S. Embassy – National 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.