

Maor Assayag

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Laser-focused on research and innovation to create a positive societal impact.

EDUCATION

University of Haifa

Master of Science in Marine Technologies

Israel

2023-2025

- Subjects in the field of DSP and ML/DL.
- Thesis research on predictive models (LSTMs, GMM-HMM) uncovering symmetric temporal dependencies in sperm whale communication structure, as part of the international CETI initiative (publication forthcoming).

Ben-Gurion University

Bachelor of Science in Computer Engineering

Israel

2015-2019

EXPERIENCE

R&D Team Lead

May 2020 – Present

Israeli Navy R&D Center

- Conducting research, design, architecture, development, evaluation, integration, and maturation of communication systems, leading teams of 15-20 programmers, engineers and QA.
- My passion is to create, dedicating years to 17-hour workdays.
- Designed and developed features and bug fixes of 20+ core microservices built from scratch using RESTful API, Websocket, Kotlin, Java, Python, Golang, C#, C++, NodeJS, Angular, JavaScript, TypeScript, CSS-HTML, RabbitMQ, Socket.IO, Prometheus-Grafana and MongoDB.
- Leading research and algorithm development in DSP projects, including underwater acoustic signature classification using cyclostationary features and RF communication system detection and decoding through spectrum analysis and advanced entropy theory in challenging environments (low SNR, Doppler effects, etc.).
- Designed and implemented custom communication protocols, including encoding, compression, parsing, fragmentation and encryption over various RF bands/Satellite.
- Led and developed an orchestration solution for real-time operational combat systems, incorporating auto-recovery, data recovery, and deployment across multiple hardware configurations. Utilized tools like Nomad for workload automation, Consul and Fabio for service discovery and configuration, and Vault for managing secrets and securing sensitive data.
- Managed a full CI/CD process using Git, Jfrog Artifactory, Azure DevOps, and Docker to enable fast and reliable building and testing processes.
- Driving team members to push boundaries and expand their knowledge, passionate about fostering open communication and excellence. **Making the impossible feasible** was our focus, not just a slogan.
- Interviewed 300+ young talents for unit enrollment across roles such as engineers, data scientists and QA.

UI/UX Director

Oct 2020 – Present

Israeli Navy R&D Center

- Leading UI/UX design for operational and experimental communication combat systems, standardizing design patterns and components across teams and accelerating development velocity.

Full-Stack Engineer

Oct 2019 – May 2020

Israeli Navy R&D Center

OPEN-SOURCE PROJECTS

transmit-OFDM | Python

2024

- Orthogonal Frequency Division Multiplexing, ready to be transmitted with an acoustic modem.

ngx-beautify-cursor | Angular

2022

- Open-source Angular package to enhance and customize website cursors.

chartjs-plugin-cyclic-axis | JavaScript, Chart.js

2021

- Open-source Chart.js plugin for cyclic pan functionality in scatter charts.

COMMUNITY

Counselor

Jan 2022 – Present

Israeli Navy R&D Center

- Led efforts to integrate diverse populations, including young talent on the spectrum (*"Specials in Uniform"*) and Orthodox programmers, into the technological unit.

Math Teacher

Oct 2016 – Oct 2019

Nachshon Program

- Taught and developed personalized mathematics lessons to foster student achievement.

Personal Mentor

Sep 2015 – Sep 2016

Perach - Tutorial Project

- Mentored students to improve academic performance and build confidence.

HONORS & AWARDS

University of Haifa *Master's Outstanding Excellence Award* 2025

IDF Chief of the General Staff *Excellence Technological Award* 2023

Israeli Navy Commander in Chief *Award for Creativity, Innovation and Excellence* 2022

Israeli Navy R&D Brigade *Excellence Award* 2022

Israeli Navy Control Unit Commander *Special Contribution Commendation* 2022

Israeli Navy Computer and Software Development Center *Excellence Award* 2021

TECHNICAL SKILLS

Languages: Hebrew (native), English (professional working proficiency)

Keywords: Distributed Networking, Cryptography, Encoding, Compression, UI & UX, Microservices, Orchestration, Digital Signal Processing, Digital Modulation, Deep learning, Machine learning

