

Maor Assayag

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Seeking a senior DSP & AI research role to drive innovation and create 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 'alien' language (sperm whale communication) using predictive models (LSTMs, GMM-HMM, Transformers) to uncover statistical and temporal dependencies and feature alignment in coda sequences as part of the CETI initiative (publication forthcoming).

Ben-Gurion University

Bachelor of Science in Computer Engineering

Israel

2015-2019

EXPERIENCE

R&D Team Lead

May 2020 – June 2025

Israeli Navy R&D Center

- Led research, design, architecture, development, evaluation, integration, and maturation of communication systems, guiding teams of 15-20 programmers, engineers, and QA.
- My passion is to create. Dedicating years to 17-hour workdays, writing ~45k LOC per year.
- Brought novel ideas from initial conception through R&D phases to successful deployment in new operational combat systems.
- Designed and developed 35+ core microservices (features and bug fixes) from scratch, leveraging technologies including RESTful API, WebSocket, Kotlin, Java, Python, Golang, C#, C++, NodeJS, Angular, JavaScript, TypeScript, CSS-HTML, RabbitMQ, Socket.IO, Prometheus-Grafana and MongoDB.
- Led 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.
- Engineered a robust orchestration solution for real-time operational combat environments, enabling features like auto/data recovery and seamless deployment across diverse hardware. Key technologies included Nomad for automation, Consul/Fabio for service management, and Vault for secure secret handling.
- Managed a full CI/CD process using Git, Jfrog Artifactory, Azure DevOps, and Docker.
- Driving team members to push boundaries and expand their knowledge, passionate about fostering open communication and excellence. **Making the impossible feasible** was our day to day, not just a slogan.
- Interviewed 300+ young talents for unit enrollment (often exclusively), covering roles including engineers, data scientists, and QA.

UI/UX Director

Oct 2020 – June 2025

Israeli Navy R&D Center

- Led UI/UX design for combat systems, standardizing pixel-perfect design patterns and components across teams and systems to accelerate 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.

morse-deep-learning | Python

2024

- Detection and decoding of Morse code signals using deep learning models (LSTM-RNN & RCNN).

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

Consultant

Jan 2022 – June 2025

Israeli Navy R&D Center

- Led efforts to integrate diverse populations, including young talent on the spectrum ("*Specials in Uniform*") and Orthodox programmers ("*Vertex*"), 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 <i>Master's Outstanding Excellence Award</i>	2025
IDF Chief of the General Staff <i>Excellence Technological Award - first in the Israeli Navy history</i>	2023
Israeli Navy Commander in Chief <i>Award for Creativity, Innovation and Excellence</i>	2022
Israeli Navy R&D Brigade <i>Excellence Award</i>	2022
Israeli Navy Control Unit Commander <i>Special Contribution Commendation</i>	2022
Israeli Navy Computer and Software Development Center <i>Excellence Award</i>	2021
Ben-Gurion University <i>B.Sc Engineering Project Departmental Representative & Audience Favorite</i>	2019

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

