Maor Assayag

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

EDUCATION

University of Haifa   Israel
Master of Science in Marine Technologies   *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   Israel
Bachelor of Science in Computer Engineering   *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 35+ 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.
- 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 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