Yossi Abutbul

Computer Science Student | RF Integrator & Test Automation
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SUMMARY

Computer Science student with 5+ years of hands-on experience as an RF Integrator. Specialises in **RF test-automation platforms** and **antenna pattern visualisation tools** using Python (FastAPI), React, and TypeScript. Experienced in NB-IoT, LoRa, LTE, and Bluetooth bring-up, signal analysis, and RF instrumentation. Delivered tooling that cut lab engineering time by **50%+**.

TECHNICAL SKILLS

Languages: Python · TypeScript · JavaScript · C (ANSI C90)
Frontend: React · Vite · Chart.js · Plotly · Responsive UI
Backend: FastAPI · REST APIs · Firebase · Python Automation
RF / Embedded: Spectrum Analyzer · Power Sensor · NB-IoT · CAT-M · LoRa · LTE · Bluetooth · FEM
Tools: Git · Make · GDB · .NET DLL Interop · USB Instrumentation

WORK EXPERIENCE

RF & Electronics Integrator
May 2020 – Present
Arad Technologies

- Designed a **React + FastAPI** platform to automate RF testing via Bluetooth, integrating Power and Spectrum Analyzers for real-time measurement, analysis, and report generation — reducing lab reporting time by **50%+**.
- Built interactive web interface for visualising **antenna radiation patterns** (2D polar & 3D surface) and RF performance metrics, improving data accessibility and analysis efficiency.
- Led hardware–software bring-up of **NB-IoT, CAT-M, and LoRa** modules including FEM integration and system validation via custom Python automation scripts.
- Performed advanced signal analysis, debugging, and optimisation for **LoRa, LTE, and Bluetooth** systems using software-driven and RF measurement techniques.

ARMY SERVICE

Operational Project Leader & RF Technician
Apr 2017 – Dec 2019
IDF Intelligence Corps – Unit 81

- Led and managed multi-disciplinary RF/tech projects under tight operational deadlines.
- Built **Python automation tools** to log and analyse Spectrum Analyzer data in the field.
- Hands-on troubleshooting and integration of advanced RF systems.

PROJECTS

RF Report Generator
React · TypeScript · Python · FastAPI · Plotly
RF test-automation platform capturing live measurements from lab instruments and generating structured reports with **2D polar & 3D radiation surface visualisations**. Reduced manual reporting time by **50%+**.

Pipeline CPU Simulator
React · TypeScript · Vite
Interactive educational CPU pipeline visualiser — step through instructions, observe hazard detection, data forwarding, and stalls in real time.

Two-Pass Assembler
C (ANSI C90)
Compiler-like assembler with two-stage processing: symbol-table construction then instruction parsing and base-4 machine-code emission. Demonstrates low-level memory management and data structures.

OPlanner
React · TypeScript · Firebase
Full-stack semester and task planner with reusable component architecture, Firebase-backed state, and progress-visualisation dashboards.

Mini-Circuits Power Sensor Wrapper
Python
Python wrapper bridging vendor .NET DLLs into a clean Pythonic API for seamless integration with lab automation scripts.

EDUCATION

BSc Computer Science – GPA 86
Oct 2022 – Present
The Open University of Israel