

Gabriel Ganeles

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EDUCATION

Technion Israel Institute of Technology, Haifa, IL

August 2021 - Present

- Candidate for Bachelor's of Science in Biomedical Engineering, GPA: 84.9
- Relevant coursework by job description:
 - Software: Digital Signal Processing, Python, Deep Learning
 - Electrical: Electronic Circuit Theory, Bioelectrical Design, Digital Signal Processing
 - Mechanical: Biomechanical Design, Fluid Mechanics, CAD
 - Biomedical: Two Biomedical Lab Courses, Quantum Tech, MRI

SKILLS

3D Modeling: Creo, Onshape, SOLIDWORKS, Blender, Rhino

EDA: LTSpice, Altium, KiCad

Programming Languages: C, C++, Python, MATLAB, Node.js/Javascript, HTML, CSS, Svelte, React, ROS2

Languages: English (Native), Hebrew (Fluent)

EXPERIENCE

Technion BioMotion Lab / Haifa, IL / Final Project for Degree

September 2024 - Present

Software Engineer

- Developed software to assist the coach of the Israeli Olympic windsurfing team in efficiently reviewing athlete footage
- Created an algorithm for real-time video-based horizon line detection
- Automated identification and stitching of pumping sequences in windsurfing footage using Python

Formula Technion / Haifa, IL

August 2023 - Present

Electrical Engineer

- Implemented a CAN network to transmit data to the autonomous control unit of an Technion Formula electric car
- Designed and built PCBs for sensor data acquisition and communication with the main processor
- Engineered a low-cost multiplexing circuit enabling concurrent sensor readings from a single PCB
- Coded the team's public-facing website to improve visibility and outreach, attracting over 3k monthly visitors

Technion's Experimental Particle Physics Group / Haifa, IL

September 2023 - July 2024

Student Researcher

- Developed an algorithm to optimize detector overlap region selection for improved accuracy in CERN's muon detector
- Simulated muon interactions within ATLAS to study detector activation patterns

Flinker Lab at NYU Langone / New York City, NY

August 2023 - September 2023

Intern

- Extracted features from the sEEG data of 50 patients to train EEG-to-speech neural network (MATLAB)
- Convert medical images (MRI and CT) into 3D brain surfaces to map electrode placements into brain regions

Technion Rocketry Club / Haifa, IL

September 2022 - July 2023

Mechanical Engineer

- Created a spring-based 3D printed parachute launcher for a hybrid solid-gas model rocket
- Collaborated across propulsion and avionics teams to develop the rocket's structural body

Technion Automated Robotics Lab / Haifa, IL

January 2021 - July 2023

Robotics Engineer

- Built a 3D printed robotic gripper for reliable handling of salmon fillets
- Programmed an Arduino Nano in C++ to control motors and driver circuits

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INDEPENDENT PROJECTS

SET and Other Games / setgame-4508c.web.app January 2023

- Programmed 4 server-less real-time multiplayer games in Svelte: Set, Anagrams (Snatch), Memory (Concentration), and Skull

Shab-BOT / Whatsapp Bot March 2022

- Developed in Node.js, functionality includes: Shabbat meal guest tracking, location dependent Shabbat candle-lighting time, whatsapp-based reminders and scheduled messages.

AWARDS

Technion Bio-Hack Hackathon / First Place April 2025

- Proposed a device to assist in the rapid prevention of cutaneous infection

Nucleate Bio-Fense Hackathon / First Place June 2024

- One month bio-convergence hackathon sponsored by DDR&D (מפא"ד) and Teva
- Lead a research and development team to develop a solution to combat-based neck injuries

VOLUNTEERING

Gazelle Valley / Park Volunteer / JERUSALEM IL September 2019 - March 2020

- Volunteered 3 hours weekly to care for the park, planting trees, cleaning litter, and clearing reeds from the swamp
- Constructed a cage for baby turtles to protect them from predatory birds