# Ben Benyamin

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## TECHNICAL SKILLS

**Programming Languages:** Python , C++ , C
**Tools & Technologies:** PyTorch , Keras, pytest , OpenCV, ROS2, Git, Linux, Docker
**Engineering Design & Production:** SolidWorks , Milling, CNC, Sheet Metal, 3D Printing (FFF) , PCB Design
**Languages:** Hebrew (Native), English (Fluent), Mandarin Chinese (Proficient)

## EDUCATION

**Northwesten University** **Dec 2025**
*Master of Science in Robotics*

**Tel-Aviv University** **2020**
*Bachelor of Science in Mechnical Engineering* *GPA: 93/100 , Dean's List*
*Emphasis on Control, Autonomous Systems and Mechatronics*

**NTNU Mandarin Training Center, Taiwan** **2023**
*Mandarin Language studies*

## EXPERIENCE

**Automata - Advanced Automation Solutions** **2022-2024**
*Hod Hasharon, Israel*
*Mechanical Engineer*

- Developed mechanical enclosures for electronics, including prototyping, design-to-cost, and production jigs.
- Developed simple PCBs used in Automata's products.
- Developed customized systems to meet client specifications and requirements.

**Automatica – Automation and Control Technologies LTD** **2020-2022**
*Kfar Saba, Israel*
*Mechanical Engineer*

- Revamped two production lines for a medical chemotherapy product based on customer requirements, including end-to-end system design, mechanical design in SolidWorks, and pneumatic systems (pistons, grippers).
- Integrated electrical components (feeders, AC servo motors) for the production lines.
- Participated in design reviews, technical drawings, and part production for project implementation.

**Israel Defense Force** **2013-2016**
*Platoon Medic*

## PERSONAL PROJECTS

**Point Cloud Object Detection with RGBD**

Implemented PointNet with addition of RGBD data with PyTorch to classify objects using both RGB and 3D point cloud data. Addressed challenges like point cloud orderlessness and occlusion in real-world scenarios. Generated a dataset with Isaac Sim, achieving 70% test accuracy on over 16,000 samples.

**Whack-a-Mole Playing Robot**

Using the Intel RealSense camera(RGBD), and AprilTags, the Franka Emika robotic arm was programmed to play Whack-a-Mole entirely wholly in the ROS2 ecosystem. OpenCV was used to coordinate the robot's actions and track the locations of the moles.

**Arm Assistive Exoskeleton**
*Commended by the Faculty of Engineering Evaluation Committee for outstanding performance at the 2020 Mechanical Engineering Graduation Project Exhibition.*

Design and manufacture of an arm assistive exoskeleton. Mechanically designed in SolidWorks, prototype created using CNC machining, sheet metal and 3D printing, structural analysis using FEA in SolidWorks.

**Interests**: Electric guitar , Hiking , Biking ,Video Games