

Amit Israeli

Deep Learning Research Engineer

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 Israel

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 personal website

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Profile

Deep Learning Research Engineer specializing in **computer vision, generative models and multimodal systems**. Experience training and fine-tuning **diffusion models, VLMs** on real-world data. Comfortable owning projects end-to-end - from **data pipelines and experimentation to evaluation, optimization and deployment** on edge devices and cloud infrastructure.

Projects

SANA-Video × Tom & Jerry – Text-to-Video LoRA

- Fine-tuned the **2B-parameter SANA-Video T2V diffusion model** with LoRA to generate controllable Tom & Jerry-style clips on a single consumer GPU.
- Built an **automatic scene-labeling pipeline** with Qwen3-VL served via vLLM to generate structured prompts (environment, characters, actions, camera), then used them for **text-conditioned training and evaluation**.
- Open-sourced code and experiments as a reproducible project.

Few-Shot Segmentation with SAM and LoRA

- **Adapted SAM and variants** (FastSAM, EfficientSAM, MobileSAM) with LoRA for few-shot segmentation, surpassing PerSAM in class-specific accuracy.
- Ran **systematic benchmarks** across sample sizes, augmentations and loss functions, tracking mIoU / Dice improvements and failure modes.
- **Pruned and quantized** SAM-based models to shrink model size by up to **80%** and enable **real-time, on-device inference** on constrained edge hardware.

CelebrityLook

- **Won** the Samsung Next MobileXGenAI Hackathon for developing an innovative AI-powered mobile app.
- **Implemented** the paper "Bridging CLIP and StyleGAN through Latent Alignment" with multi-loss optimization, enabling high-quality facial image transformations.
- **Optimized** for deployment on mobile, achieving **30fps** performance for smooth, real-time user experiences.

Professional Experience

Computer Vision Research Engineer,

Reality Defender 

2025 Jan - present

Developing multimodal deepfake and fraud detection models for video+audio, images, and text, with both classification and explanation capabilities.

Deep Learning Research Engineer, NLPearl

2024 Jun - 2025 Jan | Tel aviv, Israel

- Developed real-time systems for conversational pause detection and response generation using fine-tuned LLMs.
- Explored various architectures with LoRA and multi-stage training to boost performance.
- Built a compact language model for multi-task outputs. Worked with SOTA audio tokenizers and LLMs for audio-focused tasks.

Computer Vision Research Engineer,

LuckyLab-Freelance 

2024 Dec - 2025 Apr

- Built and deployed edge-optimized solutions for segmentation and object detection for production.

Computer Vision and Deep Learning Research

Engineer, Pashoot Robotics 

2023 May - 2024 Jun | Rehovot, Israel

- Improved object detection and segmentation in zero/few-shot settings using foundation models like SAM, YOLO-World, Grounding DINO, and CLIP.
- Worked on object tracking and 6D pose estimation with synthetic data.
- Used Blender and 3D reconstruction techniques (NeRF, Gaussian Splatting, image-to-3D) for simulation tasks.

Education

Ben-Gurion University,

Discontinued BSc in Data Science 

2020 - 2023 | Ben-Gurion, Israel

At the start of my final academic year, I transitioned to a professional role as an Algorithms Engineer at Pashoot Robotics, gaining valuable hands-on experience aligned with my career goals.