

Amit Israeli

Deep Learning Research Engineer

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Profile

Research Engineer focused on Deep Learning, Computer Vision, and NLP. Experienced in developing real-time AI systems and exploring cutting-edge models. Passionate about bridging research and application through creative, hands-on work.

Projects

PopYou-Var Text

- Fine-tuned the Visual AutoRegressive (VAR) model pretrained on ImageNet to generate task-specific Funko Pop!.
- Implemented a lightweight LoRA module alongside a frozen SigLIP image encoder to map image embeddings to text representations, enabling efficient text-to-image generation.

Few-Shot Segmentation with SAM and LoRA

Adapted the Segment Anything Model (SAM) for few-shot segmentation tasks by integrating Low-Rank Adaptation (LoRA) techniques.

- Achieved superior class-specific segmentation quality and flexibility compared to existing methods like PerSAM.
- Trained the model on diverse datasets including COCO, Soccer, and Cityscapes, effectively handling varying sample sizes and class distributions.
- Enhanced the approach by incorporating foundation models such as CLIP and SigLIP to leverage class-oriented knowledge for improved performance.

CelebrityLook

- Achieved 30fps performance on mobile devices, enabling smooth and responsive user experiences.
- Won the MobileXGenAI hackathon hosted by Samsung Next for innovative AI-driven mobile solutions.
- Implemented the paper "Bridging CLIP and StyleGAN through Latent Alignment for Image Editing," combining multiple loss functions from foundation models and facial feature extractors to ensure high-quality image transformations.

Professional Experience

Computer Vision Research Engineer,

Reality Defender

2024 Jan - present

Developing and optimizing deep learning computer vision solutions to detect deepfakes and fraudulent media.

Computer Vision Research Engineer,

LuckyLab-Freelance

2024 Dec - present

- Collaborated with LuckyLab to develop and deploy cutting-edge deep learning solutions for computer vision challenges on edge devices.
- Focused on real-time segmentation, object detection, and optimization techniques for resource-constrained environments.

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 and Deep Learning Research Engineer, Pashoot Robotics

2023 May - 2024 Jun | Rehovot, Israel

- Improved object detection and segmentation in zero/few-shot settings using 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.