SHANI ISRAELOV

Algorithm Engineer specializing in Machine Learning

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EDUCATION

2022 - 2024 | M.Sc. in Computer Science, *IMLEX* (Imaging and Light in Extended Reality)

- Joint European Union-Japan degree offered by a consortium of universities in Finland, France, and Japan. Beyond demanding high academic standards, this program focuses on enhancing adaptability, cross-cultural communication, problem-solving, and proficiency in English.
- **Master's Thesis**: Developed a novel object insertion approach for videos based on Text-to-Image Diffusion Models, focusing on Human-Object Interaction videos. Conducted at the Visual AI Lab, Toyohashi University of Technology, Japan, under Professor *Kuriyama Shigeru*.
- **Key Projects**:
  - Designed pipeline for 3D room layout representation rendering from a single image using Object Detection and Depth Estimation neural networks.
  - Autonomous Exploration in collaboration with a *Finnish startup*, implementing real-time navigation and mapping on a robot, with 3D map visualization in VR.

2017 - 2021 | B.Sc. in Electrical and Computer Engineering, Technion - Israel Institute of Technology

- Focused on Machine Learning, Signal and Image Processing, and Computers.
- **Key Projects:**
  - Developed a novel pipeline for generating street images by creating street segmentation maps from noise using StyleGAN and applying texture layers with SPADE.
  - Speckle Reduction in Ultrasound Imaging: Collaborated with radiologists to improve breast lesion classification through advanced signal and image processing techniques.
- **Autonomous Formula Vehicle:** Developed a clustering algorithm on sensor data to optimize real-time performance for state estimation.
- Exchange Student at the Polytechnic University of Turin, Italy during spring semester 2019.

PROFESSIONAL EXPERIENCE

Feb. 2020 - Aug. 2022 | Qualcomm, Haifa

- **System Engineer, Architecture Group**
  - Collaborated with cross-functional teams (Algorithms, HW, and SW) to ensure system-level requirements were met, contributing to chip bring-up and delivering a successful customer demo.
  - Managed and optimized a MATLAB simulation used by 80+ engineers across teams, migrating it from SVN to GitHub and implementing object-oriented standards and naming conventions for multi-user access.
  - Delivered Git training sessions to team members, enhancing version control skills and promoting effective collaboration across engineering teams.
- **Algorithm Engineer**
  - Conducted research and developed algorithms in Digital Signal Processing, performing design trade-off analyses, evaluating and optimizing performance.
  - Gained experience in 5G wireless communication system design and digital signal processing.

TECHNICAL SKILLS

- **Programming Languages**: Python, MATLAB, C++, Java
- **Python Libraries & Frameworks**: PyTorch, OpenCV, Numpy, Pandas, Scikit-learn, diffusers
- **Tools & Technologies**: Git, Docker, Kubernetes, Linux, CUDA

MILITARY SERVICE

2012 - 2014 | Non-commissioned officer of education, Navy, IDF

SCHOLARSHIPS AND VOLUNTEERING

- Awarded the EMJMD Scholarship by the European Union's Erasmus+ Program.
- Initiated and led an Extended Reality event at Jean Monnet University, France, bringing together industry and academic experts.