

Hila Blecher - Segev

Professional Experience

10/2018 - current: *Vision-Elements*

Computer Vision and AI Researcher:

Algorithm development for Computer Vision, Image Processing, Deep Learning and Machine Learning, tailored to the customer's needs. leading the proof of concept research and design according to customer's needs till the final development and implementation

- ❑ AI and Deep learning techniques for classification and regression (CNN,LSTM,UNET, Resnet and others) for 2D images and 3D volumes
- ❑ 3D Geometry: Mesh Processing and point cloud registration
- ❑ Medical imaging

03/2017- 07/2018: *Personify (Chicago - Urbana IL)*

Computer Vision and Machine Learning Researcher:

Real time 3D reconstruction from multi-view depth images.

Responsible for improving the quality of correspondence for mesh deformation estimation:

- ❑ Training models based on Machine learning algorithms.
- ❑ color Image correspondence algorithms
- ❑ Non rigid motion field estimation using optimization techniques

06/2012-07/2016: *Rafael Advanced Defense Systems Ltd (Israel)*

Computer Vision & Algorithms Engineer:

Research and development of real time image processing and computer vision algorithms:

- ❑ Led the algorithm development process: design, implementation, testing and integration
- ❑ Integrated real time algorithms into systems, including field testing
- ❑ Specialties:
 - ❑ Object detection
 - ❑ Target classification using various pattern recognition algorithms
 - ❑ Tracking
- ❑ Two excellence prizes for novel algorithm design and successful field experiments of computer vision algorithms.

01/2010-01/2012: *Applied Materials*

Algorithms Engineer:

Research and development of image processing algorithms for defect detection in Scanning Electron Microscopy (SEM) images

- ❑ Image segmentation
- ❑ Noise estimation for SNR improvements
- ❑ Template matching
- ❑ Supervised the algorithm integration and implementation phases in cooperation with SW, application and system teams.

2006-2009: Ben Gurion University

Teaching Assistant:

- ❑ Introduction to image processing
- ❑ Signal processing lab

Education

2009 : M.Sc. (GPA 91/100) Bio-medical Engineering Department in association with Electrical Engineering Department, Ben-Gurion University, the Earth and Planetary Image Facility.

- ❑ Thesis: "Anomaly detection in hyperspectral images" under the supervision of Prof. Stanley Rottman and Prof. Dan Bloomberg.
- ❑ **Specialties/majors:** *hyperspectral (multi - dimensional data) image processing, anomaly detection and target classification .*
- ❑ **Publications:** *"Detecting anomalous objects in hyperspectral data using segmentation", Proceedings of SPIE Vol. 7113, 711314 (2008).*

2006: B.Sc. (cum laude, GPA 93/100) Bio-medical Engineering Department, Ben Gurion University.

- ❑ **Specialties/majors:** *signal processing.*

Professional Skills

- ❑ Experienced with: Matlab , C\C++ ,OpenCV ,Eigen, Python
- ❑ Source control tools: Clear Case,SVN, github and git.