Amit Nativ

◆ 052-4229-284 ◆ amitnativ@gmail.com ◆ Hod Hashron, Israel ◆ Born 1984

Professional Experience

DEEP LEARNING AND COMPUTER VISION ALGORITHM DEVELOPER (2019 – present)
Elbit Systems, C4I&Cyber
Part of research group reporting to CTO, developing autonomous vehicles and robotic platforms.

- Development of tracking and position estimation algorithms based on deep learning methods for object detection and object re-identification, Kalman filters, position estimation, and sensor fusion.
- Deployment to production on embedded AI computing devices with limited computing power.

COMPUTER VISION ALGORITHM DEVELOPER (2018 – 2019)
Kitov Systems
Startup company developing robotic system for optical inspection

- Developed computer vision algorithms for defect detection, using machine learning, deep learning and classical methods.
- In charge of full algorithm life cycle, from research to production and support.
- Keeping track of latest academic publications

COMPUTER VISION ALGORITHM DEVELOPER (2017)
Freelancer
Developed and implemented complete POC for an agritech startup company. The provided solution performed object detection and classification in high resolution hyperspectral images. The implemented solution was based on deep learning (Faster-RCNN) algorithm.

SYSTEM ENGINEER (2012 – 2015)
Applied Materials
Electron Beam Inspection group
Involved in developing a scanning electron microscope for semiconductor wafer defect inspection. A complex multidisciplinary system that includes optics, mechanics, electronics and software.

- Defined system specifications, workflows and requirements.
- Designed various tools for system performance analysis.
- Developed algorithms for calibrating optical aberrations based on computer vision and physics.
- Developed image processing algorithms for object detection and classification.

Academic Education:

M.Sc. BIOMEDICAL ENGINEERING (2015 – 2018)
Tel Aviv University

- Experimental research in optics, holography, interferometry phase imaging and statistical optics, as well as academic focus on deep learning, machine learning and computer vision.
- Thesis title: Phase microscopy for nanometric non-destructive tests under low spatial coherence illumination. Conducted in the Optical Microscopy, Nanoscopy and Interferometry group. (http://paloma.eng.tau.ac.il/~omni/index2.php/)
- Hands on experience in building complex optical systems.
- Frontal teaching assistant – “Introduction to Optical Coherent Imaging”
- Final grade: 94

B.Sc. ELECTRICAL ENGINEERING **(2008-2013)**

Tel Aviv University

- Majors: Electro-optics, electromagnetic fields (RF), image processing.
- Final grade: 87.5

Journal Publications:

- Amit Nativ and Natan T. Shaked, "Compact interferometric module for full-field interferometric phase microscopy with low spatial coherence illumination," Opt. Lett. 42, 1492-1495 (2017)
- Amit Nativ, Haim Feldman and Natan T. Shaked, "Wafer defect detection by polarization insensitive external differential interference contrast module", Appl. Optics (under production)

International Conferences:

- A. Nativ and N. T. Shaked, "Portable Spatially Incoherent Holography for Optical Profiling of Sharp-Edge Objects," in Imaging and Applied Optics 2016, OSA Technical Digest (online) (Optical Society of America, 2016), paper DTh3C.5.

Programming Skills

- SW Python, MATLAB

Military Service

- 2002 – 2005 **Unit 669, (Sergeant Major)**
  Commander of operational teams.
  Head of a professional department.

Spoken Languages

- Hebrew
- English