

Assaf Ben-Kish - Curriculum Vitae

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Education

2022 - Present: M.Sc. in Electrical Engineering, Tel-Aviv University, Israel

- Specializing in Deep Learning and Vision-Language Models
- Current GPA: **99.17**

2018 - 2022: B.Sc. in Electrical Engineering and Computer Science, Technion, Israel

- Specialized in Machine Learning and Signal Processing
- Final GPA: **91.3 - Cum Laude**
- Included in the **President's honor list** for spring 2020 and 3 times in the Dean's honor list

Publications

• **Mitigating Open-Vocabulary Caption Hallucinations**

Assaf Ben-Kish, Moran Yanuka, Morris Alper, Raja Giryes, Hadar Averbuch-Elor. Under review. [link](#)

Due to their closed-vocabulary design, existing hallucination metrics and algorithms ignore many hallucinations produced by SOTA image captioning models. By leveraging recent progress in generative foundation models, we propose a unified framework for quantifying and mitigating open-vocabulary hallucinations.

• **Constant Beamwidth LCMV Beamformer**

Ariel Frank, *Assaf Ben-Kish, Israel Cohen.* EUSIPCO 2022. [link](#)

Finding a design for a Constant Beamwidth LCMV Beamformer which is simple, computationally efficient and that has significant sidelobe attenuation.

Research Projects

- **Reference-Free Evaluation of Vision-Language Models in Visual Question Answering Tasks** - A collaboration with Google Research (ongoing)
- **Utilizing State-Space Models For Long Context Language Modeling** - (ongoing)
- **Implementing and Improving the DDPG-MP algorithm** - Final projects in Deep Reinforcement Learning, [CRML](#) laboratory, Technion
 - Project A: Evaluating a deep robotic manipulation algorithm in a semi-dynamical environment.
 - Project B: Improving the algorithm using Model-Based methods and Ensemble methods.

Experience

- **2021-2023 - Algorithms Engineer at Vayyar**
Development of Methods for Antenna Array Calibration
 - Model-Based Trace Calibration and Model-Free Online Trace Calibration
 - Statistical Methods for Leakage Removal
 - Radiation Pattern Estimation
 - Created and Taught Vayyar's Array Calibration Course
- **2020 - 'Signals and Systems' Course Tutor at the Technion**
- **2017 and summer of 2018 - Software Developer at [Insoundz LTD](#)**
- **2014-2017 - Member of a leading R&D team at Unit 81 - The Technological Unit of the Intelligence Branch, IDF**
 - Specialized in R&D in the field of digital communication and reverse engineering
 - Awarded outstanding employee of the Electrical Engineering Department (out of 1000 employees)

Programming and Software knowledge: Python, Matlab, C, C++, Linux and open-source software, such as: Pytorch, Docker, Pybullet, FFmpeg, etc.

Community Involvement

- Mentor in a "Big Brother" program for new EE students at the Technion - 2018, 2019, 2020
- Youth Movement Supervisor + Tutor of a child from a low socio-economic background - 2013
- Year of Service - The Jewish Agency, Greater New-Haven, CT, USA - 2012-2013

Languages: Hebrew, English - native tongue level