Haifa, Israel
Open to relocation worldwide
(+972) 54-7853396
azmi.haider92@gmail.com
https://azmihaider92.github.io/
LinkedIn
Google Scholar
GitHub

Azmi Haider

Summary

PhD candidate in Machine Learning and Computer Vision at the University of Haifa. My research focuses on neural modeling of continuous signals, spanning representation, reconstruction, and probabilistic inference. I develop deep generative and neural field models using diffusion, flow matching, transformers, and tokenized representations, with an emphasis on expressive uncertainty modeling and efficient generative inference. My work spans images, 3D scenes, physical fields, and scientific machine learning.

Selected Publications

D. Aibinder, A. Haider, and D. Rosenbaum. **Empirical Bayes Flow Matching for Continuous Cryo-EM Heterogeneity.**
Under submission (2026).

A. Haider and D. Rosenbaum. **Direct Flow Neural Processes: Efficient Sampling via Flow Step Amortization.**
ICML 2026, Workshop on Structured Probabilistic Inference and Generative Modeling.

A. Haider and D. Rosenbaum. **Tokenized Neural Fields: Structured Representations of Continuous Signals.**
NeurIPS 2025, Workshop on Structured Probabilistic Inference and Generative Modeling.

A. Haider and D. Rosenbaum. **Predicting 3D Structure by Latent Posterior Sampling.**
ICLR 2025, Workshop on Frontiers in Probabilistic Inference: Sampling Meets Learning.

A. Haider and H. Hel-Or. **What Can We Learn from Depth Camera Sensor Noise?**
Sensors, 22(14):5448, 2022.

N. Privman-Horesh, A. Haider, and H. Hel-Or. **Forgery Detection in 3D-Sensor Images.**
CVPR 2018, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops, 2018, pp. 1561-1569

Professional Experience

2022 – 2023
Teaching Assistant – University of Haifa, Israel
Taught Image Processing and Advanced Computer Vision courses to undergraduate students, leading tutorials, project mentoring, and office hours.

2021 – 2022
Data Science Intern (**Face Recognition**) – Intel Corporation
Developed image preprocessing, detection, and synthetic data generation pipelines for deep-learning-based face recognition systems.

2015 – 2021
Computer Vision Internships (**3D Cameras & LiDAR**) – Intel Corporation
Designed evaluation methodologies for 3D camera and LiDAR quality across 2D/3D sensing pipelines used in deployed computer vision systems.

Education

2022 – Present	**Ph.D. in Computer Science** – University of Haifa, Israel Thesis: *Neural Modeling of Continuous Signals: Representation, Reconstruction, and Probabilistic Inference*. Advisor: Dr. Dan Rosenbaum. Expected graduation: November 2026.
2017 – 2020	**M.Sc. in Computer Science** – University of Haifa, Israel Thesis: *Forgery Detection in Depth Images*. Advisor: Prof. Hagit Hel-Or.
2012 – 2017	**B.Sc. in Electrical Engineering** – Technion – Israel Institute of Technology Focus: Computer and Software Engineering.

Technical Skills

Programming: Python, PyTorch, OpenCV.

Generative Modeling: Diffusion models, flow matching, transformers, normalizing flows, variational autoencoders, autoregressive models.

Computer Vision: Implicit neural representations, 3D reconstruction, NeRF, Gaussian Splatting, probabilistic inference, representation learning.

Selected Honors

2022 – 2025	**Excellence Scholarship** – University of Haifa
2022 – 2025	**PhD Research Fellowship** – Data Science Research Center, University of Haifa
2017 – 2020	**Graduate Research Fellowship** – Israel Science Foundation (ISF)
2020	**M.Sc. graduation with honors (94)** – University of Haifa
2011 – 2016	**Full Scholarship (Outstanding Students Program)** – Technion

Languages

Arabic — Native/Fluent
Hebrew — Fluent
English — Fluent
Spanish — Beginner