

PROFESSIONAL SUMMARY

Algorithm Tech Lead of AI specializing in high-performance Deep Learning, Computer Vision, and Generative AI. Proven track record of translating complex theoretical research (Fixed Point Equilibrium, advanced generative models, Meta-Learning, and Econometrics) into real-time industrial engineering solutions. Holder of a Ph.D. in Economics from the University of Haifa and a Post-Doctorate in Computer Science from the Weizmann Institute of Science. Leading AI technology adoption across the organization and successfully recovering and unblocking stuck, high-complexity R&D projects.

PROFESSIONAL EXPERIENCE

Algorithm Tech Lead of AI

Jan 2026 – Present

Global Technology Enterprise (Applied Materials) | Rehovot, Israel

- Leading strategic AI technology adoption across teams, driving modern deep learning methodologies into production pipelines.
- Specializing in rescuing and unblocking stalled, highly challenging engineering projects by bridging advanced theoretical foundations (fixed-point equilibrium, meta-learning) with high-performance execution.

Deep Learning / Machine Learning Algorithm Developer

Dec 2021 – Dec 2025

Applied Materials | Rehovot, Israel

- Developed high-impact computer vision and generative frameworks (Diffusion Models, GANs, U-Net, Pix2Pix) pushing subpixel accuracy boundaries in complex metrology tasks.

Postdoctoral Fellow (Computer Science & Applied Mathematics)

2020 – 2022

The Weizmann Institute of Science | Rehovot, Israel

- Conducted research on Causal Inference with GANs using PyTorch across multi-GPU setups and nonparametric distribution estimation.

Academic Lecturer & Researcher

2011 – 2019

University of Haifa, Tel-Aviv University, Ort Braude College

- Taught Econometrics, Economic Growth Models, Macro/Microeconomics, and Probability & Statistics to undergraduate students.

HIGHER EDUCATION

Degree / Position	Field of Study / Department	Institution	Period
Post-Doctorate Fellowship	Computer Science & Applied Mathematics (Causal Inference with GANs)	The Weizmann Institute of Science	2020–2022
Ph.D. in Economics	Econometrics (Dissertation: <i>Truncation Bias</i> , Adv. Prof. Moshe Kim)	University of Haifa	2014–2019
M.A. in Economics	Labor Economics (Panel Data - HRS Survey)	Tel-Aviv University	2006–2011
B.A. / B.Sc.	Economics & Statistics	University of Haifa	2002–2006

SELECTED PUBLICATIONS

- **Billfeld, N.** and Kim, M. (2019). Semiparametric Wavelet-based JPEG IV Estimator for Endogenously Truncated Data. *IEEE Access*, 7, 99602-99621.
- **Billfeld, N.** and Kim, M. (2019). Semiparametric Correction for Endogenous Truncation Bias With Vox Populi-Based Participation Decision. *IEEE Access*, 7, 12114-12132.
- **Billfeld, N.** and Kim, M. (2018). Semiparametric Maximum Likelihood Sieve Estimator for Correction of Endogenous Truncation Bias. *ERN Econometric & Statistical Methods*.
- **Billfeld, N.** and Kim, M. (2019). Endogenous Latent Masking: Neutralizing the Bias. *IEEE Access*.

TECHNICAL & PROFESSIONAL SKILLS

AI & Deep Learning Architectures: PyTorch, Diffusion Models, GANs (StyleGAN, ESRGAN), Vision Transformers, U-Net, Pix2Pix, Meta-Learning.

Methodologies & Math: Econometrics, Causal Inference, Fixed Point Equilibrium, SVR, Fourier Features, Generalized Method of Moments.

Programming Languages: Python, C++, R, MATLAB, STATA.

Languages: Hebrew (Native), English (Full Professional Proficiency).