

Yael Vinker

+972(0)-509800322 | yaelvi116@gmail.com
<https://yael-vinker.github.io/website>

Education

Postdoctoral Associate, MIT CSAIL Advisor: Prof. Antonio Torralba	2024 - Current
Ph.D in Computer Science (Computer Graphics/Vision, Deep Learning) <i>Tel Aviv University, Israel</i> Advisors: Prof. Daniel Cohen-Or and Prof. Ariel Shamir Dissertation: “Generative Visual Communication in the Era of Vision-Language Models”	2021 - 2024
M.Sc. in Computer Science (Computer Vision, Deep Learning) <i>The Hebrew University of Jerusalem, Israel</i> Advisor: Prof. Raanan Fattal Thesis: “Unpaired Learning for High Dynamic Range Image Tone Mapping”. GPA: 95/100	2019 - 2021
B.Sc. in Computer Science and Visual Communication <i>The Hebrew University of Jerusalem and Bezalel Academy of Art and Design, Israel</i> Magna cum laude. GPA: 94/100	2016 - 2019

Honors & Awards

EECS Rising Stars , MIT, 2024 (link)
Eric and Wendy Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences, 2024
Tel Aviv University President's Award for Outstanding Postdoctoral Students Abroad, 2024
Blavatnik Prize for Outstanding PhD Students in Computer Science, 2024
Nominated for the Fulbright Postdoctoral Fellowship , 2024 (declined)
Best Paper Award , ACM Transactions on Graphics SIGGRAPH Asia 2023, for the paper “Concept Decomposition for Visual Exploration and Inspiration” (link)
VATAT Scholarship for Outstanding Female PhD Candidates, 2023
Honorable Mention Best Paper Award , ACM Transactions on Graphics SIGGRAPH 2023, for the paper “Word-as-Image for Semantic Typography” (link)
Best Paper Award , ACM Transactions on Graphics SIGGRAPH 2022, for the paper “CLIPasso: Semantically-Aware Object Sketching” (link)

Teaching

Generative AI and Diffusion Models, Reichman University Five-day evening workshop with 20 participants. Main lecturer; developed the course syllabus, presentations, and managed logistics.	July 2024
Deep Neural Networks for Computer Graphics, Tel Aviv University Main lecturer; developed the course syllabus, presentations, and logistics from scratch. The course had 57 participants and received high ratings from students (6.89/7)	2023 - 2024
Seminar in Neural Networks-Based Graphics at Tel Aviv University Teaching assistant with Prof. Daniel Cohen-Or	2022 - 2024

Selected Publications

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- Ellie Arar, Yarden Frenkel, Daniel Cohen-Or, Ariel Shamir, **Yael Vinker**. “*SwiftSketch: A Diffusion Model for Image-to-Vector Sketch Generation*”. ACM Transactions on Graphics (SIGGRAPH 2025)
- Mia Tang, **Yael Vinker**, Chuan Yan, Lvmin Zhang, Maneesh Agrawala. “*Instance Segmentation of Scene Sketches Using Natural Image Priors*”. ACM Transactions on Graphics (SIGGRAPH 2025)

Sagi Polaczek, Yuval Alaluf, Elad Richardson, **Yael Vinker**, Daniel Cohen-Or. “*NeuralSVG: An Implicit Representation for Text-to-Vector Generation*”. Under review (2025)

Yael Vinker, Tamar Rott Shaham, Kristine Zheng, Alex Zhao, Judith E Fan, Antonio Torralba. “*SketchAgent: Language-Driven Sequential Sketch Generation*”. The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR 2025)

Yarden Frenkel, **Yael Vinker**, Ariel Shamir, Daniel Cohen-Or. “*Implicit Style-Content Separation using B-LoRA*”. European Conference on Computer Vision (ECCV 2024)

Rinon Gal*, **Yael Vinker***, Yuval Alaluf, Amit Bermano, Daniel Cohen-Or, Ariel Shamir, Gal Chechik. “*Breathing Life Into Sketches Using Text-to-Video Priors*”. The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR 2024). [Spotlight \(top 10%\)](#)

Omri Avrahami, Amir Hertz, **Yael Vinker**, Moab Arar, Shlomi Fruchter, Ohad Fried, Daniel Cohen-Or, Dani Lischinski. “*The Chosen One: Consistent Characters in Text-to-Image Diffusion Models*”. ACM Transactions on Graphics (SIGGRAPH 2024)

Yael Vinker, Andrey Voynov, Daniel Cohen-Or, Ariel Shamir. “*Concept Decomposition for Visual Exploration and Inspiration*”. ACM Transactions on Graphics (SIGGRAPH Asia 2023). [Best Paper Award](#)

Kushin Mukherjee*, Holly Huey*, Xuanchen Lu*, **Yael Vinker**, Rio Aguina-Kang, Ariel Shamir, Judith Fan. “*SEVA: Leveraging sketches to evaluate alignment between human and machine visual abstraction*”. Advances in Neural Information Processing Systems (NeurIPS 2023)

Kushin Mukherjee, Holly Huey, Xuanchen Lu, **Yael Vinker**, Ariel Shamir, Judith Fan. “*Evaluating machine comprehension of sketch meaning at different levels of abstraction*”. (CogSci 2023)

Shir Iluz*, **Yael Vinker***, Amir Hertz, Daniel Berio, Daniel Cohen-Or, Ariel Shamir. “*Word-as-Image for Semantic Typography*”. ACM Transactions on Graphics (SIGGRAPH 2023). [Honorable Mention Best Paper Award](#)

Hila Chefer*, Yuval Alaluf*, **Yael Vinker**, Lior Wolf, Daniel Cohen-Or. “*Attend-and-Excite: Attention-Based Semantic Guidance for Text-to-Image Diffusion Models*”. ACM Transactions on Graphics (SIGGRAPH 2023)

Yael Vinker, Yuval Alaluf, Daniel Cohen-Or, Ariel Shamir. “*CLIPascene: Scene Sketching with Different Types and Levels of Abstraction*”. IEEE International Conference on Computer Vision (ICCV 2023). [Oral Presentation \(top 1.68%\)](#)

Yael Vinker, Ehsan Pajouheshgar, Jessica Y. Bo, Roman C. Bachmann, Amit Bermano, Daniel Cohen-Or, Amir Zamir, Ariel Shamir. “*CLIPasso: Semantically-Aware Object Sketching*”. ACM Transactions on Graphics (SIGGRAPH 2022). [Best Paper Award](#)

Yael Vinker, Inbar Huberman, Raanan Fattal. “*Unpaired Learning for High Dynamic Range Image Tone Mapping*”. IEEE International Conference on Computer Vision (ICCV 2021)

Yael Vinker*, Eliahu Horwitz*, Nir Zabari, Yedid Hoshen. “*Image Shape Manipulation from a Single Augmented Training Sample*”. IEEE International Conference on Computer Vision (ICCV 2021). [Oral Presentation](#)

Work and Research Experience

Student Researcher, Google Research 2022 - 2023

Creative Camera team, Google TLV

Working under Dr. Yael Pritch Knaan. Researcher in the field of generative models and VLMs.

Research Intern, Summer@EPFL Summer 2021

École polytechnique fédérale de Lausanne, Switzerland

Supervised by Prof. Amir Zamir at VILAB- Visual Intelligence and Learning Lab.

Research Intern, Disney Research February 2021- June 2021

DisneyResearch|Studios in Zurich, Switzerland

Deep learning for content-aware video compression. Supervised by Dr. Christopher Schroers and Dr. Roberto Azevedo.

Software Engineer Intern, Google
LiveResults Proactive team, Google TLV

July 2019 - March 2020

Software Engineer Intern, Google
OneGoogle team, Google TLV

August 2018 - January 2019

Talks and Interviews

MIT Creative Machine Learning for Design course, *April 2025*

MIT CSAIL Vision-Graphics Seminar, "Can AI Really Sketch? Advances in Generative Models for Sketching", *April 2025*

MIT Face to Face, "Challenges and Advancements in Generative Models for Sketches", *April 2025*

AI Vision, MIT Media Lab, "Generative Models for Visual Communication", *November 2024*

CMU BIG (roBot Intelligence Group) Seminar, "Generative Models for Visual Communication", *November 2024*

MIT CSAIL News covers my work in the [EECS Rising Stars article](#), *November 2024*

COGGRAPH Workshop ([link](#)): Seminar about visual expression, *July 2024*

Blavatnik Prize for Outstanding Israeli Doctoral Students in Computer Science, *June 2024*:
"Generative Visual Communication in the Era of Vision-Language Models".

QueenB Academy Month, *April 2024*: Sharing my academic journey with young female students

MIT CSAIL Vision-Graphics Seminar, *March 2024*: "Generative Models for Creative Applications"

MIT Media Lab, *March 2024*: "Generative Models for Creative Applications"

Google VisCAM Seminar, *March 2024*: "Generative Models for Creative Applications"

Adobe Research GenTech Seminar, *March 2024*: "Generative Models for Creative Applications"

Berkeley Computer Vision Seminar, *March 2024*: "Generative Models for Creative Applications"

Graphics Cafe, Stanford University, *March 2024*: "Generative Models for Creative Applications"

Weizmann Vision and AI Seminar, *January 2024*: "Generative Models for Abstractions".

ICCV 2023, Paris: Oral presentation for "CLIPascene: Scene Sketching with Different Types and Levels of Abstraction"

SIGGRAPH 2023, Los Angeles: Oral presentation for "Word-as-Image for Semantic Typography"

Microsoft Data Science Bond, *May 2023* ([video](#)): "CLIPasso: Semantically-Aware Object Sketching"

Lightricks Research Seminar, *March 2023*: "CLIPasso and Word-As-Image"

Talking Papers Podcast, *March 2023*: Interview with Itzik Ben Shabat, ([video](#))

Israeli Computer Vision Day, *January 2023* ([video](#)): "CLIPasso: Semantically-Aware Object Sketching"

ACM SIGGRAPH Blog, *November 2022* ([article](#)): "Abstraction: The Key to Semantic Sketching"

RSIP Vision Magazine, *October 2022* ([article](#)): "CLIPasso: Semantically-Aware Object Sketching"

Community Involvement and Professional Activities

Publicity Co-Chair, ICCV 2025

Area Chair (TPC), SIGGRAPH 2025

MIT Face to Face. 2025

An MIT-wide community drawing project inspired by Es Devlin, the 2025 Eugene McDermott Award in the Arts at MIT recipient. <https://artfinity.mit.edu/event/face-to-face>

Conference and Journal Reviewer: CVPR, ICCV, ECCV, SIGGRAPH, SIGGRAPH Asia, IEEE Transactions on Visualization and Computer Graphics (TVCG), ACM Transactions on Graphics (TOG).

Mentor at Meduyakot, Tel Aviv University. 2022, 2024

The program aims to strengthen women's presence and leadership in exact sciences, in the program I serve as a mentor to female master's students

Mentee and community member at Woman2Woman, 8200 Alumni Association. 2021

The program promotes talented women through personal mentoring processes with leading women from different frameworks in Israeli society

Languages Hebrew- native, English- fluent