

Yotam Sechayk

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BIOGRAPHY

Yotam Sechayk is a Ph.D. candidate at The University of Tokyo, advised by Prof. Takeo Igarashi and co-advised by Prof. Ariel Shamir (Reichman University). His research focuses on visual communication for low-vision information access. He builds tools that help low-vision people use their residual vision to follow lecture videos, explore charts, and rehearse unfamiliar routes. As a low-vision person himself, he draws on lived experience to design technologies that *enhance*—rather than replace—existing visual strategies. His dissertation traces this work from personalized visual highlights to AI agents. Recent work includes *VeasyGuide* (ASSETS '25, Honorable Mention) and on-cursor visual context for chart reading (CHI '26). He serves as Accessibility Chair for CHI 2027. He holds a B.Sc. in Computer Science and Film & Television from Tel Aviv University. Before his Ph.D., he worked as a software engineer at Cadence Design Systems.

RESEARCH INTERESTS

Human-Computer Interaction, Accessibility, Low-vision Support, AI for Accessibility, E-learning Accessibility, Data Visualization Accessibility, Education Technology.

EDUCATION

2024.04 – Present	The University of Tokyo • Tokyo, Japan Ph.D. in Creative Informatics, Graduate School of Information Science and Technology (expected 2027.03) Advisor: Prof. Takeo Igarashi • Co-advisor: Prof. Ariel Shamir (Reichman University) Dissertation (in progress): <i>Visual Communication for Low-Vision Information Access</i>
2022.04 – 2024.03	The University of Tokyo • Tokyo, Japan M.Sc. in Creative Informatics, Graduate School of Information Science and Technology Advisor: Prof. Takeo Igarashi Thesis: <i>Smart Replay: Visual-Temporal Accessibility in e-learning Videos</i>
2014.10 – 2018.09	Tel Aviv University • Tel Aviv, Israel B.Sc., Double Major in Computer Science and Film & Television Graduated with honors (magna cum laude; GPA 93/100).

RESEARCH EXPERIENCE

2022.04 – Present

Igarashi Lab • The University of Tokyo

Advisor: Prof. Takeo Igarashi • Co-advisor: Prof. Ariel Shamir (Reichman University)

- Lead *UniLens* (2026 – present), a SoftBank Beyond AI CIP project building an AI web assistant that highlights and explains web content for low-vision users. Manage the research budget, supervise a research intern, and coordinate development with the SoftBank team.
- Designed *VeasyGuide*, a tool that detects instructor actions in lecture videos and dynamically highlights and magnifies them for low-vision learners. Evaluated with 8 LV and 8 sighted participants. [C.3]
- Built *Improving Low-Vision Chart Accessibility via On-Cursor Visual Context*, comparing two pointer-based context methods (Dynamic Context, Mini-map) with $N=22$ LVI. [C.5]
- Earlier and smaller projects on visual-temporal accessibility of e-learning videos, chart reading, and creative tools: *Graph Guide* [D.4], *ShowMe* [D.3], *SmartLearn* [W.1], *Smart Replay* [D.1], and *MyStoryKnight* [D.2].

2023 – 2024

Honda Research Institute Japan • Saitama, Japan

Research Intern, Human-Robot Interaction

Supervisor: Dr. Christian Arzate Cruz

Augmented facial-expression data with 3D morphable models to improve arousal–valence prediction in HRI settings. [C.1]

WORK EXPERIENCE

2018.03 – 2020.10

Cadence Design Systems • Israel

Software Engineer, Multicore Engine Team

Developed semiconductor verification tools utilizing parallel computing.

2015 – 2017

Tel Aviv University • Tel Aviv, Israel

Head of Technology, Disability Support

Investigated software and hardware solutions to assist students with disabilities and supported their adoption in coursework.

PUBLICATIONS

* indicates equal contribution. My name is underlined. Awards and recognitions appear inline with the relevant entry. Entries are numbered chronologically (1 = earliest).

International Conference Papers

- [C.7] **LandmarkLens: Predicting and Presenting Effective Landmarks for Mixed-Reality Urban Exploration**
Chu Li, Yotam Sechayk, Jared Hwang, Jon E. Froehlich, Takeo Igarashi
UIST 2026: ACM Symposium on User Interface Software and Technology.
- [C.6] **Ups and Downs: Low-Vision Perspective on Smart Elevators and Industry Design Practices**
Masaki Sawada, Yotam Sechayk, Manabi Miyagi
ASSETS 2026: ACM SIGACCESS Conference on Computers and Accessibility (experience report).
- [C.5] **Improving Low-Vision Chart Accessibility via On-Cursor Visual Context**
Yotam Sechayk, Hennes Rave, Max Rädler, Mark Colley, Zhongyi Zhou, Ariel Shamir, Takeo Igarashi
CHI 2026: ACM Conference on Human Factors in Computing Systems.
- [C.4] **No Pixel Left Behind: Filling Gaps in Anime Colorization**
Masahiro Kono, Akinobu Maejima, Yuki Koyama, Yotam Sechayk, Takeo Igarashi
CHI 2026: ACM Conference on Human Factors in Computing Systems.
- [C.3] **VeasyGuide: Personalized Visual Guidance for Low-vision Learners on Instructor Actions in Presentation Videos**
Yotam Sechayk, Ariel Shamir, Amy Pavel, Takeo Igarashi
ASSETS 2025: ACM SIGACCESS Conference on Computers and Accessibility. • **Honorable Mention Award**
- [C.2] **Task Mode: Dynamic Filtering for Task-Specific Web Navigation using LLMs**
Ananya Gubbi Mohanbabu, Yotam Sechayk, Amy Pavel
ASSETS 2025: ACM SIGACCESS Conference on Computers and Accessibility.
- [C.1] **Data Augmentation for 3DMM-based Arousal-Valence Prediction for HRI**
Christian Arzate Cruz*, Yotam Sechayk*, Takeo Igarashi, Randy Gomez
RO-MAN 2024: IEEE International Conference on Robot and Human Interactive Communication.

Doctoral Symposium

- [DS.1] **Visual Communication for Low-Vision Information Access: From Personalized Highlights to AI Agents**
Yotam Sechayk
UIST Adjunct 2026: Adjunct Proceedings of the ACM Symposium on User Interface Software and Technology.

Workshops, Posters, Demos, and Extended Abstracts

- [W.8] **Cyber-Physical Systems for Accessibility and Ability Augmentation: Bridging Diverse Communities**
 Shuchang Xu*, Riku Arakawa*, Mina Huh*, Nandi Zhang*, Tianyu Zhang*, Wazeer Zulfikar*, Ruei-Che Chang*, Yotam Sechayk*, Huamin Qu, Amy Pavel, Franklin Mingzhe Li, Yukang Yan, Brian A. Smith, Pattie Maes
 UIST Adjunct 2026: Adjunct Proceedings of the ACM Symposium on User Interface Software and Technology (workshop proposal).
- [W.7] **PreView: Rehearsing Real Routes in VR to Support Independent Navigation with Low-Vision**
Yotam Sechayk, Xinyun Cao, Dhruv Jain, Takeo Igarashi
 UIST Adjunct 2026: Adjunct Proceedings of the ACM Symposium on User Interface Software and Technology (demo).
- [W.6] **See What I Mean: A Technology Probe of AI Assistants for Chart Exploration with Low Vision**
Yotam Sechayk, Lucy Jiang, Yuhang Zhao, Takeo Igarashi
 ASSETS 2026: ACM SIGACCESS Conference on Computers and Accessibility (poster).
- [W.5] **Exploring the Role of User Comments Throughout the Stages of Video-Based Task-Learning**
 Nayoung Kim*, Yotam Sechayk*, Zhongyi Zhou, Takeo Igarashi
 CHI EA 2026: Extended Abstracts of the ACM CHI Conference on Human Factors in Computing Systems (poster).
- [W.4] **A Longitudinal Autoethnography of Email Access for a Professional with Chronic Illness and ADHD: Preliminary Insights**
 Veronica Pimenova, Yotam Sechayk, Fabricio Murai, Andrew Hundt, Shiri Dori-Hacohen
 ASSETS 2025: ACM SIGACCESS Conference on Computers and Accessibility (poster).
- [W.3] **Confidence Estimation of Few-shot Patch-based Learning for Anime-style Colorization**
 Yuexiang Ji, Akinobu Maejima, Yotam Sechayk, Yuki Koyama, Takeo Igarashi
 SIGGRAPH 2025 Posters.
- [W.2] **ImprovMate: Multimodal AI Assistant for Improv Actor Training**
 Riccardo Drago, Yotam Sechayk, Mustafa Doga Dogan, Andrea Sanna, Takeo Igarashi
 DIS 2025 Companion: ACM Conference on Designing Interactive Systems (work-in-progress).
- [W.1] **SmartLearn: Visual-Temporal Accessibility for Slide-based e-learning Videos**
Yotam Sechayk, Ariel Shamir, Takeo Igarashi
 CHI EA 2024: Extended Abstracts of the ACM CHI Conference on Human Factors in Computing Systems (late-breaking work).

Domestic Conference Papers (Japan)

- [D.4] **Graph Guide: 低視力者支援のためのセマンティック Focus+Context グラフ表示**
 Graph Guide: Semantic Focus+Context Graph Display for Low-Vision Users
Yotam Sechayk, Yuan Li, Hennes Rave, Mark Colley, Ariel Shamir, Takeo Igarashi
 WISS 2025: 第 33 回インタラクティブシステムとソフトウェアに関するワークショップ, IPSJ (in Japanese). • **Best Paper Award (最優秀論文賞)**

- [D.3] **ShowMe: 対話的な強調表示と拡大表示によるプレゼンテーションビデオの視覚的アクセシビリティの改善**
 ShowMe: Interactive Highlighting and Magnification for Improving Visual Accessibility of Presentation Videos
Yotam Sechayk, Ariel Shamir, Takeo Igarashi
 WISS 2024: 第 32 回インタラクティブシステムとソフトウェアに関するワークショップ, IPSJ (in Japanese).
- [D.2] **MyStoryKnight: A Character-drawing Driven Storytelling System Using LLM Hallucinations**
Yotam Sechayk, Gabriela A. Penarska, Ingrid A. Randsalu, Christian Arzate Cruz, Takeo Igarashi
 INTERACTION 2024, IPSJ (poster/demo).
- [D.1] **Smart Replay: e ラーニング動画における視覚的・時間的アクセシビリティの向上**
 Smart Replay: Improving Visual and Temporal Accessibility in E-learning Videos
Yotam Sechayk, Ariel Shamir, Takeo Igarashi
 WISS 2023: 第 31 回インタラクティブシステムとソフトウェアに関するワークショップ, IPSJ (in Japanese). • **Helpfeel Award for Corporate Excellence**

PATENTS

- Published **Data Collection Method and Data Collection Device**
 Christian Arzate Cruz, Randy Gomez, Yotam Sechayk
 WO 2026/053487 A1 (PCT/JP2025/015777), published March 2026. Assignee: Honda Motor Co., Ltd. Invented during internship at Honda Research Institute Japan. [C.1]

AWARDS & HONORS

- 2025 **Best Paper Award** (*Saiyushu Ronbunsho*) • WISS 2025
 Awarded for Graph Guide. [D.4]
- 2025 **Honorable Mention Award** • ACM ASSETS 2025
 Awarded for VeasyGuide. [C.3]
- 2023 **Helpfeel Award for Corporate Excellence** • WISS 2023
 Awarded for Smart Replay. [D.1]
- 2018 **Graduated with Honors** (magna cum laude) • Tel Aviv University

GRANTS & FELLOWSHIPS

- 2024 – Present **MEXT Scholarship for Ph.D. Studies in Japan** • Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT)
 Full tuition and monthly stipend for the doctoral program.
- 2026 – 2027 **Softbank Beyond AI CIP Grant** • Softbank
 UniLens project (Jun 2026 – Mar 2027). Co-wrote the proposal; project lead. PI: Prof. Takeo Igarashi.
- 2025 **Softbank Beyond AI Research Grant** • Softbank
 Co-wrote the proposal. PI: Prof. Takeo Igarashi.

2023	Google Award for Inclusion Research · Google USD 35,000 for “Enhance E-Learning Accessibility: Exploring AI Supported Temporal Approaches for Inclusive Online Education.” Co-wrote the proposal; PI: Prof. Takeo Igarashi.
2022 – 2024	MEXT Scholarship for Master’s Studies in Japan · Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) Full tuition and monthly stipend for the master’s program.

INVITED TALKS & RESEARCH VISITS

2025.09 – 2025.11	Research Visit · University of Washington, Seattle, WA Host: Prof. Jon E. Froehlich (Makeability Lab). September 15 – November 14, 2025.
2024.10	Awareness-(less) based Accessibility Invited Talk, University of Texas at Austin, October 9, 2024. Host: Prof. Amy Pavel.
2024.08 – 2024.10	Research Visit · University of Texas at Austin, Austin, TX Host: Prof. Amy Pavel. August 2 – October 25, 2024.
2023.05	Accessibility and Usability in Online Learning Videos Invited Talk, Microsoft Israel, May 2023. Host: Deep Learning Team.

Conference Presentations

2026	ACM CHI 2026 [C.5] · ACM ASSETS 2026 [C.6] (joint) · ACM UIST 2026 Doctoral Symposium [DS.1]
2025	ACM ASSETS 2025 [C.3] · WISS 2025 [D.4]
2024	WISS 2024 [D.3]
2023	WISS 2023 [D.1]

TEACHING

2026	Accessibility in HCI and the AI Revolution Guest Lecture · Undergraduate Human-Computer Interaction, The University of Tokyo Instructor of record: Prof. Takeo Igarashi.
2025	Accessibility in HCI and the AI Revolution Guest Lecture · Undergraduate Human-Computer Interaction, The University of Tokyo Instructor of record: Prof. Takeo Igarashi.

MENTORING & ADVISING

2026 – present	Faith Luo · Research Intern, UniLens project (Software Engineer, thatgamecompany)
2026 – present	Ritsu Ueda · Georgia Institute of Technology
2026 – present	Masaki Sawada · Tsukuba University of Technology. [C.6]
2026	Koyo Tanaka · University of California, San Diego

2025 – present	Eleyah Melamed · Reichman University
2025 – present	Xinyun Cao · University of Michigan. [W.7]
2024 – present	Veronica Lewis · Ph.D., George Mason University
2024 – present	Veronica Pimenova · University of Michigan. [W.4]
2024 – 2025	Riccardo Drago · M.Sc., Polytechnic University of Turin. [W.2]
2024	Nayoung Kim · Undergraduate, DGIST. [W.5]

ACADEMIC SERVICE

Organizing

2026 – 2027	Accessibility Chair · ACM CHI 2027 Organizing Committee
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Reviewing

2026	ACM CHI 2026 · ACM UIST 2026 · ACM MobileHCI 2026
2025	ACM CHI 2025 · ACM UIST 2025 · ACM DIS 2025 · ACM IDC 2025
2024	ACM CHI 2024 · ACM UIST 2024
Special Recognition for Outstanding Reviews: CHI 2025 (×2), UIST 2025, CHI 2026.	

MEDIA COVERAGE

2025	<i>AT and Me: An Interview with Yotam Sechayk</i> Perkins School for the Blind · Paths to Technology · interview by Veronica Lewis, August 2025.
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TECHNICAL SKILLS

Programming	Python, JavaScript / TypeScript, C/C++, Git, Linux
AI / LLMs	LLM-based interactive systems, multimodal LLMs (vision-language models), agent frameworks, OpenAI API, Gemini API
Machine Learning	PyTorch, Keras, OpenCV, Whisper
Web	React, Flask, HTML / CSS
Cloud & DevOps	Docker, Google Cloud Platform
AI Coding Tools	Claude Code, Codex, GitHub Copilot
Design & Media	Figma, Adobe Creative Suite (Premiere Pro, After Effects, Photoshop)

LANGUAGES

Hebrew (native) · English (fluent) · Japanese (advanced).