www.gkovacs.com

Geza Kovacs

geza@cs.stanford.edu

I am a researcher at Lilt working in Human-Computer Interaction, Data Science, and Machine Learning, using Interactive Machine Translation to boost translator productivity. During my PhD at Stanford, I built HabitLab, an app for data-driven behavior change with 12,000+ daily active users. I have published first-author papers in venues including CHI, CSCW, and Learning@Scale, and have reviewed, served on committees, and given invited talks at WMT, EACL, AMTA, CHI, UIST, CSCW, and IMWUT. I have been awarded the NSF and NDSEG Fellowships, and a Stanford Human-Centered AI Grant. I wrote UNetbootin, an open-source project with 40 million downloads.

Education

Ph.D, Computer Science Stanford University 2019
Thesis: HabitLab: In-the-wild Behavior Experimentation at Scale. Advisor: Michael Bernstein. GPA: 4.0/4.0

B.S. and M.Eng, Computer Science Massachusetts Institute of Technology 2013
Thesis: Multimedia for Language Learning. Advisor: Robert Miller. GPA: 5.0/5.0

Work Experience

Principal Research Scientist Lilt San Francisco Feb 2021 - present
Senior Research Scientist Lilt San Francisco Aug 2019 - Feb 2021
I am the head of HCI research and manage a team of researchers at Lilt, an interactive machine translation startup.
Improved interactive MT system speed by shifting computation client-side via TensorflowJS and heuristics.
Built named entity transliteration system based on Transformer architecture using tensor2tensor and Tensorflow.
Developed metrics and logging to determine how translators spend their time and predict translator performance.
Ran A/B tests to evaluate website translation ROI, and developed system that recommends pages to translate.

Research Intern Microsoft Research Redmond. Manager: Merrie Morris Summer 2015
Designed and built an educational social feed app usable by pre-literate children. Published at CSCW 2017.

Research Intern Microsoft Research Beijing. Manager: Darren Edge Summer 2014
Built QuizCram, a quiz-driven MOOC lecture viewer that improves learning outcomes. Presented at CHI 2015.

Software Engineering Intern Google Mountain View. Manager: Shumin Zhai Summer 2013
Developed a machine learning system for detecting taps on the phone bezel, for use in Android input methods.

Software Engineering Intern Google Mountain View. Manager: Ulas Kirazci Summer 2012
Developed an NLP system to automatically generate glossaries from book text. Patent granted US9483460B2.

Software Engineering Intern Google Mountain View. Manager: Ulas Kirazci Summer 2011
Developed a machine learning system to predict the quality of user reviews, now deployed on Google Play.

Software Development Engineer Intern Microsoft Redmond Summer 2010
Built the IntelliSense code completion system for a scientific computing language, and contributed to its compiler.

Publications in Journals and Conference Proceedings

Geza Kovacs, Zhengxuan Wu, Michael Bernstein. "Not Now, Ask Later: Users Weaken Their Behavior Change Regimen Over Time, But Expect To Re-Strengthen It Imminently." *ACM annual conference on Human Factors in Computing Systems (CHI) 2021*.

Samuel Läubli, Patrick Simianer, Joern Wuebker, **Geza Kovacs**, Rico Sennrich, Spence Green. "The Impact of Text Presentation on Translator Performance." *Target: International Journal of Translation Studies, 2021 (to appear)*.

Geza Kovacs, Drew Mylander Gregory, Zilin Ma, Zhengxuan Wu, Golrokh Emami, Jacob Ray, Michael Bernstein. "Conservation of Procrastination: Do Productivity Interventions Save Time Or Just Redistribute It?" *ACM annual conference on Human Factors in Computing Systems (CHI) 2019*.

Geza Kovacs, Zhengxuan Wu, Michael Bernstein. "Rotating Online Behavior Change Interventions Increases Effectiveness But Also Increases Attrition." *ACM annual conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2018*.

Rajan Vaish, Neil Gaikwad, **Geza Kovacs**, Andreas Veit, Ranjay Krishna, Imanol Arrieta Ibarra, Camelia Simoiu, Michael Wilber, Serge Belongie, Sharad Goel, James Davis, Michael Bernstein. "Crowd Research: Open and Scalable University Laboratories." *ACM Symposium on User Interface Software and Technology (UIST) 2017*.

Kiley Sobel, **Geza Kovacs**, Galen McQuillen, Andrew Cross, Nirupama Chandrasekaran, Nathalie Riche, Ed Cutrell, Meredith Morris. "EduFeed: A Social Feed to Engage Preliterate Children in Educational Activities." *ACM annual conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2017*.

Geza Kovacs. "Effects of In-Video Quizzes on MOOC Lecture Viewing." *ACM annual conference on Learning at Scale (L@S) 2016*.

Geza Kovacs and Robert C. Miller. "Smart Subtitles for Vocabulary Learning." *ACM annual conference on Human Factors in Computing Systems (CHI) 2014*.

Publications in Adjunct Conference Proceedings

Stanford Crowd Research, **Geza Kovacs**, Rajan Vaish, Michael Bernstein. "Daemo: A Self-Governed Crowdsourcing Marketplace". *ACM Symposium on User Interface Software and Technology (UIST) 2015, Poster*.

Geza Kovacs. "FeedLearn: Using Facebook Feeds for Microlearning." *ACM annual conference on Human Factors in Computing Systems (CHI) 2015, Extended Abstracts*.

Geza Kovacs. "QuizCram: A Question-Driven Video Studying Interface." *ACM annual conference on Human Factors in Computing Systems (CHI) 2015, Extended Abstracts*.

Joseph Jay Williams, **Geza Kovacs**, Caren Walker, Samuel G Maldonado, Tania Lombrozo. "Learning Online via Prompts to Explain." *ACM annual conference on Human Factors in Computing Systems (CHI) 2014, Extended Abstracts*.

Geza Kovacs and Robert C. Miller. "Foreign Manga Reader: Learn Grammar and Pronunciation while Reading Comics." *ACM Symposium on User Interface Software and Technology (UIST) 2013, Demo*.

Geza Kovacs. "Smart Subtitles for Language Learning." *ACM annual conference on Human Factors in Computing Systems (CHI) 2013, Extended Abstracts*.

Geza Kovacs. "ScreenMatch: providing context to software translators by displaying screenshots." *ACM annual conference on Human Factors in Computing Systems (CHI) 2012, Extended Abstracts*.

Patents

Tania Bedrax-Weiss, **Geza Kovacs**, Ulas Kirazci. "Automated formation of specialized dictionaries." US9483460B2. Filed 10/2013, Published 11/2016, Expires 01/2034.

Meredith Morris, Nathalie Henry Riche, Edward B . Cutrell, Andrew C . Cross, Natasa Milic, Nirupama Chandrasekaran, Galen McQuillen, Kiley Sobel, **Geza Kovacs**. "Presenting educational activities via an extended social media feed." US20180068578A1. Filed 09/2016, Published 03/2018.

Invited Talks

Geza Kovacs. "Predictive Translation Memory in the Wild: A Study of Interactive Machine Translation Use on Lilt." *Association for Machine Translation in the Americas (AMTA) Workshop on the Impact of Machine Translation 2020*.

Awards and Honors

Stanford Human-Centered AI Grant (for my research project HabitLab)	2018
National Defense Science and Engineering Graduate Fellowship	2013
National Science Foundation Graduate Research Fellowship	2013
1st place, ACM UIST (User Interface Software and Technology) Student Innovation Contest	2012
1st place, ACM CHI (Human Factors in Computing Systems) Student Research Competition	2012
Phi Beta Kappa (top 10% of students at MIT)	2012
Tau Beta Pi (top 12.5% of Engineering students at MIT), Eta Kappa Nu (top 25% of EECS students at MIT)	2011
1st place, MIT Autonomous Robotics Competition (MASLAB)	2010

Open-source Projects

UNetbootin (LiveUSB Creator) https://en.wikipedia.org/wiki/UNetbootin
40 million downloads. UNetbootin creates bootable USB flash drives for various (50+) Linux distributions.

Ubuntu Installer for Windows (Wubi) https://en.wikipedia.org/wiki/Wubi_(software)
Now part of Ubuntu. Built the first versions of Wubi, which allows Ubuntu to be installed from Windows.

HabitLab (In-the-wild Behavior Change Research Platform) https://habitlab.stanford.edu
12,000+ daily active users. I built HabitLab over my Ph.D, and it is still used for research at Stanford Medical School.

Skills and Technologies

Programming Languages: Python, JavaScript, C, C++, Java, TypeScript, R, C#
Machine Learning and Deep Learning: Tensorflow, PyTorch, scikit-learn, TensorflowJS, xgboost
Natural Language Processing and Machine Translation: Transformer, BERT, tensor2tensor, fairseq, SpaCy
Data Science and Distributed Computing: NumPy, SciPy, Pandas, SQL, NetworkX, Hadoop, MapReduce, Spark
Data Analysis and Visualization: Jupyter, RStudio, Plotly, D3.js, ggplot2, matplotlib, seaborn, bokeh, streamlit
Quantitative UX Research: Mixed models, Survival analysis, A/B testing, Experiment design, ANOVA, statsmodels
Backend Development: Node.js, Flask, Docker, Kubernetes, MySQL, MongoDB, Redis, AWS EC2, Google Cloud
Web and Mobile Development: HTML, CSS, JavaScript, TypeScript, React, Angular, Polymer, Webpack, Android
Languages: Fluent English, Chinese (Mandarin), and Hungarian. Can read Japanese, Vietnamese, and Spanish.

Academic Conference Reviewing and Committees

Organizing Committee, WMT 2022 Shared Task on Word-Level Auto-Completion	2021
Program Committee, EACL 2021 Bridging HCI and NLP Workshop	2021
Reviewer, ACM Conference on Human Factors in Computing Systems (CHI)	2015, 2018, 2019, 2021, 2022
Reviewer, ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)	2021
Reviewer, ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)	2019
Reviewer, ACM Symposium on User Interface Software and Technology (UIST)	2017, 2018

Teaching Experience

Understanding Users (CS 377U) – Teaching Assistant, at Stanford — Spring 2019

Human Computer Interaction Research (CS 376) – Teaching Assistant, at Stanford — Fall 2018

Natural Language Processing (6.863) – Teaching Assistant, at MIT — Fall 2012

Introduction to C++ IAP (6.096) – Instructor, at MIT — January 2011
My lectures and teaching materials for this course are available on MIT OpenCourseWare:
http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-096-introduction-to-c-january-iap-2011

MASLAB Mobile Autonomous Systems Lab (6.186) – Software Director, at MIT — January 2011
Gave lectures on computer vision and managed the software stack for MIT's autonomous robotics competition.

Management and Mentorship

Sai Gouravajhala, Senior Research Scientist at Lilt.	August 2020 – present
Hannah Yan, Senior Data Scientist at Lilt.	September 2020 – present
Jordan Huffaker, Research Intern at Lilt.	Summer 2021
Jessy Lin, Research Engineer at Lilt. Now a Ph.D student at UC Berkeley.	August 2019 – August 2020
Ming-Chang Chiu, Data Science Intern at Lilt. Now a Ph.D student at USC.	Summer 2020
Zhengxuan Wu, MS student researcher at Stanford.	Fall 2018 – Spring 2019
Zilin Ma, undergraduate researcher at Stanford. Now a Ph.D student at Harvard.	Summer 2018
Drew Mylander Gregory, undergraduate researcher at Stanford.	Summer 2018
Golrokh Emami, undergraduate researcher at Stanford.	Summer 2018

Relevant Coursework

Deep Learning (CS 230), Natural Language Processing (6.864, 6.863), Artificial Intelligence (6.034), Data Mining (CS 224w), Statistical Models (6.804), Statistics (18.440), Linear Algebra (18.700), Security (6.857), Bioinformatics (6.047), Human-Computer Interaction (6.803), Algorithms (6.006, 6.046), Linguistics (24.900), Compilers (CS 143)

Selected Press

HabitLab

WIRED - The HabitLab Browser Extension Curbs Your Time Wasted on the Web. January 2019
https://www.wired.com/story/habitlab-browser-extension/

Lifehacker - Prevent Procrastination With This Chrome Extension. February 2019
https://lifehacker.com/prevent-procrastination-with-this-chrome-extension-1832723418

The New York Times - Finding It Hard to Focus? Maybe It's Not Your Fault. August 2018
https://www.nytimes.com/2018/08/14/style/how-can-i-focus-better.html

Lifehacker - Be More Mindful of the Time You Waste Online With HabitLab. August 2018
https://lifehacker.com/be-more-mindful-of-the-time-you-waste-online-with-habit-1828118354

WIRED - The Chrome Extensions We Can't Live Without. February 2018
https://www.wired.com/story/best-chrome-extensions/

How-To Geek - HabitLab Subtly Helps You Change Bad Online Habits. August 2018
https://www.howtogeek.com/fyi/free-download-habitlab-subtly-helps-you-change-bad-online-habits/

The Stanford Daily - HabitLab browser extension aims to help users regain control of their online browsing behavior. March 2019
https://www.stanforddaily.com/2019/03/13/habitlab-browser-extension-aims-to-help-users-regain-control-of-their-online-browsing-behavior/

Entrepreneur - Use These Strategies to Maximize Productivity Without Inventing an Extra Weekday. May 2018
https://www.entrepreneur.com/article/312764

Tencent News - (Chinese) 这款斯坦福大学的工具，让你远离加班，提升200%效率 March 2019
https://new.qq.com/omn/20190311/20190311A0BBRU.html

Crowd Research / Daemo

Stanford University News - A Stanford-led platform for crowdsourced research gives experience to global participants October 2017
https://news.stanford.edu/2017/10/23/crowdsourced-research-gives-experience-global-participants/

WIRED - Amazon's Turker Crowd Has Had Enough. August 2017
https://www.wired.com/story/amazons-turker-crowd-has-had-enough/

UNetbootin

Forbes - How To Try Linux Without Making Any Changes To Your PC. September 2018
https://www.forbes.com/sites/jasonevangelho/2018/09/18/how-to-safely-try-linux-on-your-mac-or-windows-pc/

PCWorld - Create a Bootable Linux Flash Drive in Three Easy Steps. February 2012
https://www.pcworld.com/article/249870/create_a_bootable_linux_flash_drive_in_three_easy_steps.html

Lifehacker - The Complete Guide to Saving Your Windows System with a Thumb Drive. March 2010
https://lifehacker.com/the-complete-guide-to-saving-your-windows-system-with-a-5504531

Wubi

Ars Technica - Wubi arrives: a look at Ubuntu 8.04 alpha 5. February 2008
https://arstechnica.com/information-technology/2008/02/wubi-arrives-a-look-at-ubuntu-8-04-alpha-5/

Lifehacker - Install Ubuntu on a Windows Netbook, No Partitioning Needed. May 2008
https://lifehacker.com/install-ubuntu-on-a-windows-netbook-no-partitioning-ne-5542387

PCWorld - The Ubuntu guide for displaced Windows users. March 2013
https://www.pcworld.com/article/2030132/the-ubuntu-guide-for-displaced-windows-users.html