Geza Kovacs

geza@cs.stanford.edu

gkovacs.com

EDUCATION Stanford University PhD Computer Science GPA: 4.0/4.0 2013 - 2019Massachusetts Institute of Technology BS+MEng Computer Science GPA: 5.0/5.0 2008 - 2013

EXPERIENCE

Lilt – Senior Research Scientist, San Francisco

2019 - now

I lead the HCI research group at Lilt, a human-in-the-loop machine translation startup.

- Improved the speed of Lilt's interactive machine translation system by shifting computation client-side and using heuristics to reuse computations.
- Ran user studies to evaluate where translators spend their time during translation, and identify features of translator behaviors that predict better performance.
- Ran large-scale A/B tests to evaluate the return-on-investment of translating websites, and developed a system to recommend which pages should be translated to which languages.

Stanford – PhD – led research projects published at top-tier venues, including:

2013 - 2019

Large-scale Experiments for Online Behavior Change – published at CHI 2021, CHI 2019, and CSCW 2018 I built HabitLab (http://habitlab.stanford.edu/), an app for Chrome + Android with 12,000+ daily active users which helps users reduce time online. I used HabitLab for a variety of machine learning and data science work:

- Predicted changes in users' intervention preferences over time (using **LSTM Networks**; Python/PyTorch)
- Analyzed time redistribution effects caused by interventions (using **Mixed Models**; R/Python/SciPy)
- Personalized interventions to each user based on effectiveness (using Reinforcement Learning; Python)

Effects of In-Video Quizzes on MOOC Lecture Viewing – published at Learning at Scale 2016

 A large-scale data mining analysis of Coursera's in-video interaction logs in Machine Learning courses, analyzing effects of in-video quizzes on users' video viewing and seeking behavior (Python/Hadoop/Pandas)

Smart Subtitles for Foreign Language Learning – published at CHI 2014

• An interactive video viewer which uses **natural language processing** to improve vocabulary learning. Extracts transcripts via OCR, models users' knowledge, and provides personalized learning support.

Other work published at CSCW 2017 (EduFeed), UIST 2017 (Crowd Research), CHI 2015 (FeedLearn, QuizCram), UIST 2013 (GrammarVis), CHI 2012 (ScreenMatch) – complete publication list on page 2.

Microsoft Research - Research Intern, Redmond

Summer 2015

Designed and built an educational social feed app usable by pre-literate children. Published at CSCW 2017.

Microsoft Research – Research Intern, Beijing

Summer 2014

Built a quiz-driven MOOC lecture viewer that improved learning outcomes. Published at CHI 2015.

Google Research – Software Engineering Intern, Mountain View

Summer 2013

Developed a machine learning system for detecting taps on the phone bezel, for use in Android input methods.

Google - Software Engineering Intern, Mountain View

Summer 2012

Developed an NLP system to detect vocabulary and generate glossaries from book text (used MapReduce).

Google - Software Engineering Intern, Mountain View

Summer 2011 Developed a machine learning system to predict the quality of user reviews, now deployed on Google Play.

Microsoft – Software Development Engineer Intern, Redmond – worked on compilers

Summer 2010

Google – Summer of Code – worked on FFmpeg (open-source video transcoding library)

Summer 2009

OPEN-SOURCE PROJECTS

UNetbootin (LiveUSB Creator) - http://unetbootin.github.io/ 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.

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, Most Useful, ACM UIST (User Interface Software and Technology) Student Innovation Contest, 2012 1st place, ACM CHI (Conference on Human Factors in Computing Systems) Student Research Competition, 2012

1st place, MIT Autonomous Robotics Competition (Maslab), 2010

CONFERENCE PAPERS **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 (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.

JOURNAL PAPERS 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).

PEER-REVIEWED EXTENDED ABSTRACTS 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.

INVITED TALKS

REVIEWING

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 (iMpacT 2020).

Reviewer for CHI (2015, 2018, 2019, 2021), UIST (2017, 2018), CSCW (2021), IMWUT (2019).

TEACHING EXPERIENCE Understanding Users (CS 377U) – Teaching Assistant, at Stanford

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

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

Introduction to C++ IAP (6.096) – Instructor, at MIT

Spring 2019 Fall 2018 Fall 2012

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 an autonomous robotics competition.

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), HCI (6.803), Algorithms (6.006, 6.046), Linguistics (24.900), Compilers (CS 143)

SELECTED PRESS

HabitLab

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

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

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

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

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

Daemo

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

A Stanford-led platform for crowdsourced research gives experience to global participants. Stanford University News, October 2017.

https://news.stanford.edu/2017/10/23/crowdsourced-research-gives-experience-global-participants/

UNetbootin

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

Installing Ubuntu on an old netbook with hair tearing and profanity. Network World, August 2014. https://www.networkworld.com/article/2465150/installing-ubuntu-on-an-old-netbook-with-hair-tearing-and-profanity.html

Linux on the NUC: Using Ubuntu, Mint, Fedora, and the SteamOS beta. Ars Technica, February 2014. https://arstechnica.com/gadgets/2014/02/linux-on-the-nuc-using-ubuntu-mint-fedora-and-the-steamos-beta/

Wubi

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

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

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