

Geza Kovacs**geza@cs.stanford.edu****gkovacs.com**

EDUCATION	Stanford University PhD Computer Science GPA: 4.0/4.0 2013 – now Massachusetts Institute of Technology BS+MEng Computer Science GPA: 5.0/5.0 2008 – 2013
RESEARCH EXPERIENCE	Stanford – PhD – led several research projects published at top-tier venues, including: 2013 – now <i>Large-scale Experiments for Online Behavior Change</i> – published at 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: <ul style="list-style-type: none"> • 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) • Analyzed effects of rotating interventions on effectiveness and attrition (Cox Regression and LMM; R) • Personalized interventions to each user based on effectiveness (using Reinforcement Learning; Python) • Predicted time spent on webpages, based on browsing visit history data (using Random Forests; Python/H2O) <i>Effects of In-Video Quizzes on MOOC Lecture Viewing</i> – published at Learning at Scale 2016 <ul style="list-style-type: none"> • 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) <i>Smart Subtitles for Foreign Language Learning</i> – published at CHI 2014 <ul style="list-style-type: none"> • 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.
INDUSTRY EXPERIENCE	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 <i>Ubuntu</i> . Built the first versions of Wubi, which allows Ubuntu to be installed from Windows.
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)
SKILLS AND TECHNOLOGIES	Programming: Python, R, JavaScript, C/C++, Java, Scala, C#, Ruby, TypeScript, CoffeeScript, Haskell, Bash Machine Learning: PyTorch, scikit-learn, Keras, TensorFlow, Deep Learning (RNN/LSTM/CNN/GAN), RL Natural Language Processing: NLTK, word embeddings (word2vec), parsing (PCFG), WordNet, Attention Data Mining: NumPy, SciPy, Pandas, NetworkX, Hadoop, MapReduce, H2O, SQL, NoSQL (MongoDB/Redis) Data Science: Mixed models, Survival analysis, Experiment design, A/B testing, Multi-armed bandits, mTurk Data Analysis: Jupyter, RStudio, Visualization (D3.js/ggplot2/Plotly/Bokeh), Clustering, Sentiment Analysis Backend Systems: Node.js, Flask, MongoDB, PostgreSQL, Redis, Docker, Google Cloud, AWS EC2, CUDA Web + Mobile: HTML/CSS/JS, Polymer, React, Webpack, Flow, JSX, Android (Java, Cordova, NativeScript) Languages: Fluent English and Chinese (Mandarin). Intermediate Hungarian, Vietnamese, Japanese, Spanish.

AWARDS AND HONORS	<p>Stanford Human-Centered AI Grant (for my research project HabitLab), 2018</p> <p>National Defense Science and Engineering Graduate Fellowship, 2013</p> <p>National Science Foundation Graduate Research Fellowship, 2013</p> <p>1st place, Most Useful, ACM UIST (User Interface Software and Technology) Student Innovation Contest, 2012</p> <p>1st place, ACM CHI (Conference on Human Factors in Computing Systems) Student Research Competition, 2012</p> <p>1st place, MIT Autonomous Robotics Competition (Maslab), 2010</p>
TEACHING EXPERIENCE	<p>Understanding Users (CS 377U) – Teaching Assistant, at Stanford <i>Spring 2019</i></p> <p>Human Computer Interaction Research (CS 376) – Teaching Assistant, at Stanford <i>Fall 2018</i></p> <p>Natural Language Processing (6.863) – Teaching Assistant, at MIT <i>Fall 2012</i></p> <p>Introduction to C++ IAP (6.096) – Instructor, at MIT <i>January 2011</i></p> <p>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</p> <p>MASLAB Mobile Autonomous Systems Lab (6.186) – Software Director, at MIT <i>January 2011</i></p> <p>Gave lectures on computer vision and managed the software stack for an autonomous robotics competition.</p>
JOURNAL AND CONFERENCE PAPERS	<p>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.</p> <p>Geza Kovacs, Zhengxuan Wu, Michael Bernstein. “Rotating Online Behavior Change Interventions Increases Effectiveness But Also Increases Attrition.” ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2018.</p> <p>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.</p> <p>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 Collaborative Work (CSCW) 2017.</p> <p>Geza Kovacs. “Effects of In-Video Quizzes on MOOC Lecture Viewing.” ACM annual conference on Learning at Scale (L@S) 2016.</p> <p>Geza Kovacs and Robert C. Miller. “Smart Subtitles for Vocabulary Learning.” ACM annual conference on Human Factors in Computing Systems (CHI) 2014.</p>
PEER-REVIEWED EXTENDED ABSTRACTS	<p>Stanford Crowd Research, Geza Kovacs, Rajan Vaish, Michael Bernstein. “Daemon: A Self-Governed Crowdsourcing Marketplace”. ACM Symposium on User Interface Software and Technology (UIST) 2015, Poster.</p> <p>Geza Kovacs. “FeedLearn: Using Facebook Feeds for Microlearning.” ACM annual conference on Human Factors in Computing Systems (CHI) 2015, Extended Abstracts.</p> <p>Geza Kovacs. “QuizCram: A Question-Driven Video Studying Interface.” ACM annual conference on Human Factors in Computing Systems (CHI) 2015, Extended Abstracts.</p> <p>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.</p> <p>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.</p> <p>Geza Kovacs. “Smart Subtitles for Language Learning.” ACM annual conference on Human Factors in Computing Systems (CHI) 2013, Extended Abstracts.</p> <p>Geza Kovacs. “ScreenMatch: providing context to software translators by displaying screenshots.” ACM annual conference on Human Factors in Computing Systems (CHI) 2012, Extended Abstracts.</p>