Geza Kovacs

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Education

Stanford University
PhD, Computer Science GPA: 4.0/4.0 Advisor: Michael Bernstein *2013 – now*

Massachusetts Institute of Technology
MEng, Computer Science GPA: 4.9/5.0 Advisor: Rob Miller *2012 – 2013*
BS, Computer Science GPA: 5.0/5.0 *2008 – 2012*

Industry Experience

Microsoft Research – Research Intern, Redmond *Summer 2015*
Microsoft Research – Research Intern, Beijing *Summer 2014*
Google – Software Engineering Intern, Mountain View *Summer 2011; Summer 2012; Summer 2013*
Microsoft Corporation – Software Development Engineer Intern, Redmond *Summer 2010*
Google – Summer of Code, FFmpeg (video transcoding library) *Summer 2009*

Research Highlights

HabitLab: Large-scale Online Behavior Change Experiments (published at CHI 2019 and CSCW 2018)
HabitLab is an online experimentation platform I developed during my PhD at Stanford with *12,000+ daily active users*, which I have used to conduct a variety of experiments, data science, and machine learning 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)
- 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)

Effects of In-Video Quizzes on MOOC Lecture Viewing (published at Learning at Scale 2016)
A large-scale data analysis of Coursera's in-video interaction logs across Machine Learning courses, analyzing effects of in-video quizzes on users' video watching and seeking behaviors (implemented in Python).

EduFeed: A Social Feed to Engage Preliterate Children in Educational Activities (published at CSCW 2017)
Smart Subtitles for Foreign Language Learning (published at CHI 2014)
FeedLearn: Microlearning in Facebook Feeds (published at CHI 2015 EA)
QuizCram: Question-Driven Video Viewing (published at CHI 2015 EA)

Open-source Projects

UNetbootin (LiveUSB Creator) *January 2007 – now*
Built a utility to create bootable USB flash drives for a variety (50+) of Linux distributions.
40 million downloads, http://unetbootin.github.io/

Wubi (Ubuntu Installer for Windows) *November 2006 – August 2007*
Built the first versions of Wubi, which allows Windows users to safely install Ubuntu without repartitioning.
Now part of Ubuntu and ships on the official Ubuntu CD, http://wubi.sourceforge.net/

Relevant Coursework

Deep Learning (CS 230), Natural Language Processing (6.864+6.863), AI (6.034), Network Analysis (CS 224W), Computational Cognitive Science (6.804), Computational Biology (6.047), HCI (6.803), Computer Security (6.857), Compilers (CS 143), Algorithms (6.006+6.046), Linear Algebra (18.700), Probability (18.440)

Skills and technologies

Programming Languages: Python, JavaScript, R, Java, C, C++, C#, Scala, Ruby, CoffeeScript, Haskell, Bash
Machine Learning: PyTorch, sklearn, Keras, TensorFlow, H2O, RL, Deep Learning (RNN/LSTM/CNN/GAN)
Data Mining: Jupyter, NumPy, SciPy, Pandas, NLTK, NetworkX, MapReduce, Mongo, SQL, ggplot2, Plotly
Data Science: Mixed models, Survival analysis, Experiment design, A/B testing, Multi-armed bandits, NLP
Web Development: HTML/CSS/JS, Node.js, Flask, Polymer, D3.js, React, Flow, Webpack, MongoDB, Redis
Mobile Development: Cross-platform JS (Cordova, NativeScript), Android (Java), Responsive Web Design

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

Teaching Experience

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

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

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

Instructor – Introduction to C++ IAP (6.096) 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

Software Director – MASLAB Mobile Autonomous Systems Lab (6.186) at MIT *January 2011*

Gave lectures on computer vision and managed the software stack for an autonomous robotics competition.

Journal and Conference Papers

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 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 Collaborative Work (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.

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.