Mike Schaekermann

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OVERVIEW

My research interest is at the intersection of machine learning and human-computer interaction. In particular, I look at how the power of human and machine intelligence may be combined to solve problems too hard to be tackled by computational methods alone. My work in this topic revolves around the analysis of medical time series data.

EDUCATION

Ph.D. Candidate	2016 - Present

University of Waterloo, ON, Canada
Computer Science
Advisors: Edith Law and Kate Larson

Bachelor of Science in Engineering	2014

Salzburg University of Applied Sciences, Austria
Media Informatics
Thesis Supervisor: Lennart Nacke

Staatsexamen (equivalent to Bachelors)	2011

University of Marburg, Germany
Medicine

AWARDS & HONOURS

David R. Cheriton Graduate Scholarship ($10,000) — UWaterloo	2016
International Doctoral Student Award ($11,760/year) — UWaterloo	2016
Amazon Web Services Research Grant ($7,000) — Amazon	2016
Merit-based Scholarship — Salzburg University of Applied Sciences	2014
Merit-based Scholarship for Foreign Studies	2014
Engineering Scholarship — both Economic Chamber of Salzburg	2013
Nominee for the German National Academic Foundation	2009

CONFERENCE WORKSHOPS

Designing for Curiosity: an Interdisciplinary Workshop. Co-organized with Edith Law, Pierre-Yves Oudeyer, Ming Yin, & Alex Williams at **CHI'17**.

CONFERENCE PAPERS

Online Bayesian Transfer Learning for Sequential Data Modeling. Jaini, P., Chen, Z., Carbajal, P., Law, E., Middleton, L., Regan, K., Schaekermann, M., Trimponias, G., Tung, J., & Poupart, P. **ICLR'17**. Toulon, France.

Testing Incremental Difficulty Design in Platformer Games. Wehbe, R. R., Mekler, E. D., Schaekermann, M., Lank, E., & Nacke, L. E. **CHI'17**. Denver, CO.

WORKSHOP PAPERS

Resolvable vs. Irresolvable Ambiguity: A New Hybrid Framework for Dealing with Uncertain Ground Truth. Schaekermann, M., Law, E., Williams, A. C., & Callaghan, W. Workshop on Human-Centered Machine Learning at **CHI'16**. San Jose, CA.

WORK EXPERIENCE	**Visiting Researcher** Inria, FLOWing Epigenetic Robots and Systems Lab, France	2017
	Software Engineering Intern Google, Mountain View, CA	2017
	Teaching Assistant for "Intro to Artificial Intelligence" University of Waterloo, ON, Canada	2016
	Entrepreneur SpontaneousOrder GmbH, Berlin, Germany	2011 - 2015
	Visiting Researcher University of Ontario Institute of Technology, ON, Canada	2013 - 2014
	Tutor for "Applied Mathematics" Salzburg University of Applied Sciences, Austria	2012 - 2013
	Research Assistant at Core-Unit "BrainImaging" University Medical Center, Marburg, Germany	2009 - 2010
PRESEN-TATIONS	**Resolvable vs. Irresolvable Ambiguity: A New Hybrid Framework for Dealing with Uncertain Ground Truth.** (see above) Workshop on Human-Centered Machine Learning at CHI 2016, San Jose, CA.	2016
	Hacking Brain-Computer Interfaces Singularity Meets Self-Improvement (SMSI) Meetup, Berlin, Germany	2015
	Implicit Surface Modeling for 3D Printing WebGL Meetup, Berlin, Germany	2015

SELECTED PROJECTS

CrowdEEG
Framework to combine machine and human intelligence for the scalable and accurate analysis of human clinical EEG recordings. This is an active research project in the HCI CrowdLab at the University of Waterloo, Canada, led by professor Edith Law.

3D Simulation of the Human Endocrine System
Real-time 3D simulation of the hypothalamic-pituitary-adrenal (HPA) axis, a part of the human neuro-endocrine system. This was done as final project for a course on "Simulation Methods in Physiology and Neurobiology" at the medical school of the University of Marburg, Germany.

Implicit Surface Modeling for 3D Printing
Web application enabling real-time customization and animation of 3D-printable objects. It makes use of implicit surfaces, raymarching and the iso-surface extraction algorithm Marching Cubes.

SERVICE & LEADERSHIP

Journal Reviewer: ACM Transactions on Interactive Intelligent Systems (TiiS) Special Issue on Human-Centered Machine Learning (2017)
Conference Reviewer: CSCW (2018), CHI (2017), CHI PLAY (2016)
Membership: Association for Computing Machinery (ACM)
Other: Advisor for incoming international students (2012), and president of the students council (2013) at Salzburg University of Applied Sciences, Austria