Michael Warren Skirpan

CONTACT INFORMATION	19 Sumner Ave. Pittsburgh, PA 15221	608-886-2295 michael.skirpan@colorado.edu
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PROFESSIONAL ROLES

Executive Director, **Community Forge**, Wilkinsburg, PA

Grant and Program Advisor, Pittsburgh Learning Commons

EDUCATION

University of Colorado - Boulder, Boulder, CO

Ph.D. Computer Science, Completed Fall 2017

- Research Areas: *Data Ethics, Machine Learning, Public Communication, and Ethics Education*
- Advisor: Tom Yeh, Ph.D.

University of Pittsburgh, Pittsburgh, PA

B.Phil., Philosophy (Honors), May 2010

B.S., Economics (minor: Physics), May 2010

RECENT PROFESSIONAL EXPERIENCE

University of Wisconsin - Madison   AY 2016-17
Software Engineer and Designer of web application for multi-institutional NSF-funded educational research project. EQUIP is an app used by educational researchers and teachers to gather observational data and understand equality and social dynamics in classroom participation.

Quantified Self Immersive Theatre and Interactive Art Production   2016
Writer, Producer, Interaction Designer, and Project Lead on 35 person team for Knight Foundation grant to produce Quantified Self - an immersive and interactive performance about the future and ethics of personal data in our society

Inclusive Design Institute   Summer 2016
Google Summer of Code project researching and implementing interactive data dashboard for rapidly creating and sharing accessible data visualizations.

Fast Forward Labs   Summer 2015
Graduate Intern researching, implementing, and writing report on the near-future possibilities and ethics around Deep Learning. See the Deep Neural Net Image Classification system we built at http://www.pictograph.us

CU-Boulder: Teaching   Spring 2014 - Summer 2017
Human-Centered Computing Foundations (instructor)
Democracy in the Digital Era (self-designed and taught course)
User-Centered Design II (co-instructor with Tom Yeh)
HCC: Big Data (co-instructor with Tom Yeh)
Education Psychology and Adolescent Development (instructional staff with Kris Gutierrez)

Logan School for Creative Learning   Summer 2014 - 2015

Summer Camp Activity Design and Counselor (Hands-on Science Programs)

University of Pittsburgh, LRDC: Research Associate   May 2011 - January 2013
Research Assistant to Julie Fiez doing Web Development, Data Analysis, and Experimental Design

PUBLICATIONS

1. *[Under Review]* **Skirpan, M.**, Costello, W "Coding for Respect: A Philosophical Framework for Evaluating the Ethics of Autonomous Machine Action," *Proceedings of Machine Learning Research.*

2. **Skirpan, M.**, Cameron, J., Yeh, T. "More Than a Show: Using Personalized Immersive Theater to Educate and Engage the Public in Technology Ethics," *Forthcoming in Proceedings of the ACM: SIG-CHI Conference 2018.*

3. **Skirpan, M.**, Yeh, T., Fiesler, C. "What's at Stake: Characterizing Risk Perceptions of Emerging Technologies," *Forthcoming in Proceedings of the ACM: SIG-CHI Conference 2018.*

4. **Skirpan, M.**, Cameron, J., Yeh, T. "Quantified Self: An Interdisciplinary Immersive Theater Project Supporting a Collaborative Learning Environment for CS Ethics," *Proceedings of the ACM: SIG-CSE Conference 2018.*

5. **Skirpan, M.**, Beard, N., Bhaduri, S., Fiesler, C., Yeh, T. "Ethics Education in Context: A Case Study of Novel Ethics Activities for the CS Classroom," *Proceedings of the ACM: SIG-CSE Conference 2018.*

6. **Skirpan, M.**, Fiesler, C. "Ad Empathy: A Design Fiction," *Forthcoming in Proceedings of the ACM: SIG-GROUP Conference 2018.*

7. **Skirpan, M.**, Gorelick, M. "The Authority of "Fair" in Machine Learning," *Proceedings of ACM: SIG-KDD Conference 2017*, 2017.

8. **Skirpan, M.**, Yeh, T. "Designing a Moral Compass for the Future of Computer Vision using Speculative Analysis," *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2017.

9. **Skirpan, M.**, Yeh, T. "Beyond the Flipped Classroom: Learning by Doing Through Challenges and Hack-a-thons" *Proceedings of ACM: SIG-CSE Conference 2015* , 2015.

10. **Skirpan, M.** "Learning How to Learn: An Essay on the Philosophy of Education" *Diss.*, University of Pittsburgh, 2011.

ARTISTIC
PORTFOLIO
- Data Artist, **Flow**   Ars Electronica, 2016
- Playwright and Interaction Design, **Quantified Self** Knight News Challenge, 2016
- Data Artist and Designer, **Fireflies**   ATLAS Lobby installation, 2015-16

AWARDS
- John S. and James L. Knight Foundation's News Challenge on Data Winner   2016
- Engineering Excellence Fund, Major Award – Engineering and Art Grant   2015-2016
- Chancellor's Fellowship for Excellence in STEM Education   AY 2014-15
- Engineering Excellence Fund, Minor Award – ATLAS Lobby Installation Fall 2014
- Dean's Fellowship for BPhil Thesis   Summer 2009

PUBLIC WRITING AND PRESS
- Denver Post - Authored Article on Data Privacy and Ethics, August 2017
- Pittsburgh Post Gazette - Community Forge Announcement, June 2017
- Vice Motherboard - Quoted for Article on Wikipedia, February 2017
- Daily Camera - Coverage of Quantified Self, April 2016
- KDNuggets - Authored Article on How Neural Networks Learn, September 2015

OUTREACH
- Case Problem Support, Student Advisor, and Judge - Daniel's Fund Interdisciplinary Ethics Competition at CU Law School   November-February 2016-17
- Project Advisor for CU Boulder CS Senior Project Team - Students for Instructional Improvement   AY 2015-16
- Boulder Country Day School: Technology Curriculum Development   Fall 2014 - Spring 2015
- Alicia Sanchez Elementary School: After-school Program Design and Support   Fall 2013 - Spring 2014

HARDWARE AND SOFTWARE SKILLS
- Programming Languages: Python, JavaScript, C, C++, Bash
- Web Technologies: React, NodeJS, CSS/Sass, jQuery, D3, ProcessingJS
- System Administration: Linux (Debian and Ubuntu), Nginx, Docker
- Hardware: Arduino, ARM/PIC Microcontrollers, Raspberry Pi
- Creative Technologies: Processing, TouchDesigner, OpenFrameworks