Michael Warren Skirpan

CONTACT
INFORMATION
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WEBSITE
mwskirpan.com

SKILLS
Writing (fiction and non-fiction), Immersive and Interactive Experience Design, AI and Data Ethics Strategy and Consulting, Business Development, and Program Design

PROFESSIONAL
ROLES

Special Faculty of Computing Ethics, Department of Philosophy, Dietrich College, **Carnegie Mellon University**

Executive Director, **Community Forge**

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

PROFESSIONAL
EXPERIENCE

Project Amelia   Autumn 2019
Writer, Conceiver, and Creative Lead of Immersive Theatre Experience about our future with AI, data collection, and technology. Led the software development of the Debate Me! App used in the show, allowing people to participate in a digital Oxford-style debate.

Pittsburgh Learning Commons   2017 - present
Co-founder and program advisor of educational non-profit focused on cross-disciplinary learning experiences and youth empowerment initiatives. Supported the design of the PLC Learning Consortium after-school program held at Community Forge. Aided in creation of technology curriculum and computer lab.

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. Saltz, J, **Skirpan, M.**, Gorelick, M, Fiesler, C, Yeh, T, Heckman, R, Beard, N "Integrating Ethics into Machine Learning Courses," *ACM Transactions on Computing Education* 19(4), 2019 ACM Transactions on Computing Education 19(4), 2019

2. Soden, R., **Skirpan, M.**, Fiesler, C., Ashktorab, Z., Baumer, E., Blythe, M., Jones, J. "CHI4EVIL: Creative Speculation on the Negative Impacts of HCI Research," *CHI EA '19 Extended Abstracts of ACM: SIG-CHI 2019 Conference on Human Factors in Computing Systems.*

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

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

5. **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.*

6. **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.*

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

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

9. **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.

10. **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.

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

Artistic Portfolio	
	• Writer, Conceiver, Creative Lead, **Project Amelia** Bricolage Production Company, 2019
	• Designer and Writer, **Anti-Virus Software, Immersive Pod** Bricolage Production Company - Bazaar, 2018
	• 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

- Alfred P. Sloan Award - Public Understanding of Science, Technology, and Economics 2019
- Community Player of the Year - Queen's Gambit Chess Institute 2019
- Who's Next Pittsburgh? Artist Award by Incline Magazine 2018
- 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

- The Theatre Times - Review of Project Amelia October 2019
- WESA - Coverage of Project Amelia, September 2019
- Pittsburgh in the Round - Review of Project Amelia, September, 2019
- Pittsburgh Post Gazette - Coverage of Project Amelia
- 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

Invited Speaker or Panelist

- Maker Ed Conference - Getting out of the University and into the Community - Panel Moderator October 2019
- World AI Summit - Panelist October 2019
- Passion Meets the Road Awards - Speaker September 2019
- PNC Bank AI Summit - Speaker August 2019
- PEAL Center Mastermind Artists - Panelist February 2019
- Brookings Institute - Metropolitan Council - Panelist January 2019
- NeurIPS AI for Social Good - AI and Civil Society - Panelist December 2018
- Thrival - AI Ethics Workshop September 2018
- K&L Gates and CMU Conference on AI Ethics - Panelist April 2018
- Invited Presenter, FATML Workshop at SIG-KDD August 2017

OUTREACH	• Board Member - Partnership to Advance Responsible Technologyies September 2018 - Present
	• Board Member - Queen's Gambit Chess Institute May 2018-Present
	• 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