

# Pat Healy

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## CURRICULUM VITAE

### STATEMENT

I am a serious games researcher with 6 years of experience designing, developing, and assessing video games. I hold my research interests, passion for teaching, and pursuit of creative opportunities in equal regard, which thus far has made academia an attractive option. My current research focus is on investigating procedural rhetoric as a mechanism for serious games' ability to educate, persuade, or inspire in various contexts.

### CURRENT POSITION

Graduate Student Researcher  
University of Pittsburgh  
Summer 2019 - Present

### GRADUATE EDUCATION

University of Pittsburgh  
School of Computing & Information  
PhD in Information Science  
Summer 2019 - Present  
Advised by Dmitriy Babichenko  
Expected to graduate summer 2024  
GPA: 3.98

### UNDERGRAD EDUCATION

University of Pittsburgh  
Class of 2019  
B.S. in Information Science  
GPA in Major: 4.0  
B.S. in Computer Science  
GPA in Major: 3.59  
B.A. in Philosophy  
GPA in Major: 3.87  
GPA Overall: 3.764

### INTERESTS

Serious Games • Simulation Rhetoric  
HCI • Social Computing • Anarchism  
Queer Game Design • Free Software  
"Social Impact Games" • XR

## POSITIONS HELD

### GRADUATE STUDENT RESEARCHER

#### & TEACHING ASSISTANT | SUMMER 2019 - PRESENT

School of Computing & Information @ University of Pittsburgh

- Researching the application of serious game design in various contexts, including early childhood education, healthcare, and most notably, civic engagement and political rhetoric
- Assisting faculty in teaching introductory Information Science courses as well as taking larger initiatives in the design and teaching of game development electives

### UNDERGRADUATE RESEARCHER | FALL 2016 - SPRING 2019

Working for Kids: Building Skills LLC

- Collaborated with Neuroscience researchers to design, develop, and assess educational technologies to teach the public about brain development.
- Lead teams in the creation and evaluation of two games: the First Pathways Game and Abingdon High: Homecoming.

### UNDERGRADUATE TEACHING ASSISTANT

#### & PEER TUTOR | FALL 2016 - SPRING 2019

University of Pittsburgh

- Served as undergraduate teaching assistant for five courses in three departments.

### APPLICATION DEVELOPER | SPRING 2018 - SPRING 2019

InPho Lab @ University of Pittsburgh

- Automated research tasks for a History and Philosophy of Science project focused on cataloging gender statistics in the entire history of science based on data from the Stanford Encyclopedia of Philosophy and crowdsourcing through Amazon's Mechanical Turk

### SOCIAL MEDIA AMBASSADOR | FALL 2016 - SPRING 2019

University of Pittsburgh Office of Admissions

- Provide content for social media accounts (@h2ppatrick) for marketing purposes
- Interact with prospective students regularly, answering questions about the University

### SOFTWARE DEVELOPER | SPRING 2017 - SPRING 2019

Vibrant Media Lab @ University of Pittsburgh

- Pioneered the software development behind the OdysseyNow project, an emulation of the Magnavox Odyssey
- Continued development on the Scanner Praxis: an open-source book scanner
- Established the VML/Place project: an open-source art project based on /r/Place

### UNDERGRADUATE RESEARCHER | SUMMER 2018

McLaren Lab @ Carnegie Mellon University HCI Institute

- Researched educational games for teaching math skills to middle school students, as a part of the HCII Summer Research Program
- Assessed the outcomes of agency options in an in-the-classroom math education game and the effectiveness of erroneous examples-based decimal education compared to other, more traditional electronic learning methods

### STUDENT RESEARCHER | SUMMER 2014 - SPRING 2015

Army Medical Research Institute of Chemical Defense

- Researched bioscavengers for organophosphate nerve agents on base at the Aberdeen Proving Ground: Edgewood Sector
- This was part of a high school research capstone program, which saw me working in the lab every other day, through my senior year

## TEACHING EXPERIENCE

I've served as instructor for the following courses at the University of Pittsburgh.

CMPINF 0401	Intermediate Programming	Spring 2023
INFSCI 1450	Game Design	Fall 2019, Fall 2020, Fall 2021, Fall 2022

I've served as teaching assistant for the following courses at the University of Pittsburgh.

INFSCI 1430	User Experience Engineering	Spring 2021
INFSCI 1061	Game Implementation	Spring 2019, Spring 2020
INFSCI 0510	Data Analytics	Fall 2020
INFSCI 0010	Intro to Information, Systems, & Society	Spring 2020
CS 0449	Intro to Systems Software	Spring 2019
CS 0401	Intermediate Programming with Java	Fall 2018, Fall 2017
CS 0008	Intro to Programming with Python	Spring 2018
CS 0007	Intro to Programming with Java	Fall 2017, Spring 2018, Fall 2018
Peer Tutoring	CS 0007 through CS 1501	Summer 2017
ENGLIT 0331	Great Books & Modernity Part 2	Spring 2017
ENGLIT 0330	Great Books & Modernity Part 1	Fall 2016

## EXTRACURRICULARS & SERVICE

### Game Jam Organizing @ University of Pittsburgh | Spring 2020 - Present

- Organized Games 4 Social Impact 2022, Games 4 SocialImpact 2021 and the Oakland Homeschool Jam

### Graduate Student Organizing Committee | Summer 2019 - Present

- Advocating for a variety of social justice causes with fellow grads, organizing public demonstrations and regular meetings

### School of Computing and Information DEI Committee | Fall 2021 - Present

- Acting as student representative to advocate for equitable representation of historically-underrepresented groups in my school

### Pitt Men's Glee Club | Fall 2015 - Spring 2019

- Served as the club's media chairman and formerly the business manager, sang bass

## AWARDS

### Games4SocialImpact: "Most Fun" Award | Fall 2019

- Awarded for You Are Pat Gallagher, a political game essay

### University Honors College: Honors Scholar | Spring 2019

- A designation recognizing my involvement with coursework and research opportunities in Pitt's University Honors College

### Games4Health: Best Unity3D Implementation | Fall 2018

- Awarded for My Sister's Cabin, an empathy game about human trafficking

### Mary Ellen Callahan Undergraduate Research Award | Spring 2018

- Awarded by the University Honors College recognizing undergraduate research in the social sciences and humanities

### Kuzneski Cup Innovation Challenge Finalist | Fall 2017

- Finalist in this Pitt Innovation Institute competition for my game, First Pathways: Go, a Pokemon: Go-style location-based cooperative experience for parents and their children

### Chancellor's Undergraduate Teaching Fellowship | Fall 2016

- Awarded by the University Honors College for my work as a teaching assistant for the Honors courses Great Books and Modernity parts one and two

## SKILLS

PROGRAMMING | C# • PYTHON • JAVA • PHP • RUBY • JS • HTML/CSS/BOOTSTRAP

GAME ENGINES/TOOLS | UNITY • REN'PY • TWINE • UNREAL ENGINE

CONTENT CREATION | PREMIERE PRO • PHOTOSHOP • AFTER EFFECTS

MISCELLANEOUS | WET LAB SKILLS • *Typography-Based Comedy* • DSLR PHOTOGRAPHY

# PUBLICATIONS

## PAPERS

**Who engages and why it matters? Describing participant engagement in a serious game intervention for patients with advanced cancer**

Kai-Lin You, Rebecca K. Delaney, Natalie McKinley, Pat Healy, Teresa H. Thomas.

International Journal of Gaming and Computer-Mediated Simulations (In Press, 2023)

**A Narrative Serious Game to Teach Self-Advocacy Skills in Advanced Cancer**

Pat Healy, Kai-Lin You, Andrew Xu, Teresa Hagan Thomas, Dmitriy Babichenko

Procedia Computer Science 206 (2022), 162–172. <https://doi.org/10.1016/j.procs.2022.09.095> International Society for Research on Internet Interventions 11th Scientific Meeting.

**Modeling Non-Cooperative Dialogue: Theoretical and Empirical Insights**

Anthony Sicilia, Tristan Maidment, Pat Healy, Malihe Alikhani

Transactions of the Association for Computational Linguistics 2022; 10 1084–1102. doi: [https://doi.org/10.1162/tacl\\_a\\_00507](https://doi.org/10.1162/tacl_a_00507)

**The Simple Interactions Tool: Studying the Impact of two Intervention Programs with Pre-School age Children.**

Judy Cameron, Madison Very, Pat Healy, Amelia Potter, Jelena Komanchuk, Lani Vargas, Sachi Penha, Julianne Wanner, Sai Bhatte, Delaney Jones, Allyson Letavic, Nicole Letourneau, Jeanette Trauth.

Society for Research in Child Development Virtual Biennial Meeting 2021.

**The Use of Agent-Based Models As Non-Player Characters in Serious Games.**

Dmitriy Babichenko, Pat Healy, Marcela Gomez, Sandra Kane-Gill, Eliza Beth Littleton, Peter Brusilovsky, Paul Cohen, Ravi Patel.

Conference Paper in 2020 IEEE 8th International Conference on Serious Games and Applications for Health(SeGAH). DOI: 10.1109/SeGAH49190.2020.9201889

**SterileAR: Evaluation of Augmented Reality and Computer Vision Approaches for Real-Time Feedback in Sterile Compounding Training.**

Dmitriy Babichenko, Ravi Patel, Victoria Grieve, Stephen Canton, Pat Healy, Eliza Littleton, Nicole Donnellan, Edward Andrews.

Conference Paper in 2020 6th International Conference of the Immersive Learning Research Network. DOI: 10.23919/iLRN47897.2020.9155164

## PRESENTATIONS

**Dr. Zoo: An Exposure Therapy Game for Needle Anxiety**

Pat Healy, Dmitriy Babichenko

Serious Play Conference, Orlando, Florida, June 15th, 2022.

**Deception Detection in Human-Machine Visual Dialog.**

Pat Healy, Tristan Maidment, Anthony Sicilia, Dmitriy Babichenko, Malihe Alikhani.

STAR Talk at the Natural Language, Dialog and Speech Symposium, The New York Academy of Sciences, 2020.

**A New Neuroscience Education Program to Promote Healthy Brain Development in Children.**

Judy L. Cameron, Alexandra S. Miragaia, Pat Healy, Samantha Sostorecz, Jorge Garcia-Cordero, Rysa L. Gagliano, Alexis Bialota, Katie Pyle, Karlie Brasch, Niyati Panchal, Shalini Jose, Jeanette Trauth.

Society for Research in Child Development 2019 Biennial Meeting.

## POSTERS

**Dr. Zoo: A serious game to reduce fear of needles in children**

Pat Healy

International Society for Research on Internet Interventions, 11th Scientific Meeting. Pittsburgh, PA, USA. September 18-21, 2022 [Tech Demonstration].

**A SMART trial design to evaluate impact of specific serious game mechanisms on engagement and self-advocacy in female cancer patients**

Teresa Hagan Thomas, Pat Healy, Andrew Xu, Kai-Lin You, Dmitriy Babichenko

International Society for Research on Internet Interventions, 11th Scientific Meeting. Pittsburgh, PA, USA. September 18-21, 2022.

**Using a mobile game for exposures to reduce needle phobia in young children [Poster]**

Lu, C., Healy, P., Silk, J. S., Lindhiem, O., Babichenko, D.

56th Annual Association for Behavioral and Cognitive Therapies Convention, New York City, NY, (2022, November 17-20).

**The Development of a Novel Educational Game Based on Developmental Neuroscience to Promote Healthy Brain**

**Development in Children.**

Pat Healy, Shalini Jose, Lexi Bialota, Niyati Panchal, Rysa Gagliano, Tyler Foxwell, Beth Myers, Jen Bradley, Madison Very, Jeanette Trauth, Judy Cameron.

Poster session. University of Pittsburgh Psychiatry Research Day 2019.

**Working for Teens: Developing Decision-Making Skills in Adolescence**

Tricia H. Shelton, Alexandra Miragaia, Jenny Kwon, David Horvath, Blake Vacuolo, Pat Healy, Neal D. Ryan, Judy L. Cameron

Poster Session. University of Pittsburgh Psychiatry Research Day 2019.

**Assessing the impact of agency options in a decimal learning game intervention.**

Bruce MacLaren, Pat Healy, Sung Hyun Back, Komal Dhull, Pooja Casula.

Poster Session. Carnegie Mellon University Human-Computer Interaction Institute 2018 REU Poster Session.

**Evaluating the merits of erroneous examples as a decimal arithmetic teaching strategy.**

Bruce MacLaren, Komal Dhull, Pooja Casula, Pat Healy, Sung Hyun Back.

Poster Session. Carnegie Mellon University, Human-Computer Interaction Institute 2018 REU Poster Session.

**Assessing the standards of somatosensory evoked potential analysis.**

Partha Thirumala, Pat Healy, Rebecca Doyle.

Poster Session. University of Pittsburgh Office of Undergraduate Research 2016 Celebration of Research.

You can find my portfolio on my website, [patwhealy.com](http://patwhealy.com)

References available upon request.