

Pat Healy

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CURRICULUM VITAE

STATEMENT

I'm a serious games researcher with 8 years of experience designing, developing, and assessing video games. I hold my research, teaching, and creative pursuits in equal regard, which thus far has made academia an attractive option, though I've maintained a part-time job in the game industry through my PhD. My dissertation project is a community-engaged codesign project, creating a museum virtual world to facilitate inter-generational communication about local history (work-in-progress on that project is viewable at playablearchive.com).

CURRENT POSITIONS

PHD CANDIDATE

DEPARTMENT OF INFORMATICS & NETWORKED SYSTEMS, SCHOOL OF COMPUTING & INFORMATION (SCI), UNIVERSITY OF PITTSBURGH
May 2019 - Present
Defense Expected December 2025

GAME STUDIO INTERN

SIMCOACH GAMES
Summer 2023 - Present

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 • Virtual Worlds • VR • HCI • Social Computing • Anarchism • Queer Game Design • Free Software

POSITIONS HELD

GRADUATE STUDENT RESEARCHER, TEACHING ASSISTANT, & TEACHING FELLOW | SUMMER 2019 - PRESENT

School of Computing & Information @ University of Pittsburgh

- Researching the application of serious game design in various contexts, including healthcare, civic engagement, and historic preservation
- Took on a notably large teaching load, taking initiative in the design and teaching of game development electives and intermediate programming courses.

GAME STUDIO INTERN | SUMMER 2023 (FULL-TIME)

FALL 2023 - PRESENT (PART-TIME)

SimCoach Games

- Developed, tested, and optimized serious games as the developer on teams of designers, artists, producers, and behavioral health professionals
- Primarily developed NextStopVR, an open-world virtual reality transit simulation.
- Served as the programming instructor for the Simcoach Games Game Studio Apprenticeship in Summer 2025, leading a group of 40 students

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.

UNDERGRAD TEACHING ASSISTANT | 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 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

- Provided content for social media accounts (@h2ppatrick) for marketing purposes

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, and 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

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

TEACHING EXPERIENCE

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

INFSCI 1450	Game Design	Fall 2025
CMPINF 1201	Digital Narrative & Interactive Design	Spring 2025
INFSCI 1450	Game Design	Fall 2024
INFSCI 0410	Human Centered Systems	Summer 2024
CMPINF 0401	Intermediate Programming	Spring 2024
CMPINF 0401	Intermediate Programming	Fall 2023
INFSCI 1450	Game Design	Fall 2023
CMPINF 0401	Intermediate Programming	Spring 2023
INFSCI 1450	Game Design	Fall 2022
INFSCI 1450	Game Design	Fall 2021
INFSCI 1450	Game Design	Fall 2020
INFSCI 1450	Game Design	Fall 2019

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

INFSCI 1430	User Experience Engineering	Spring 2021
INFSCI 0510	Data Analytics	Fall 2020
INFSCI 1061	Game Implementation	Spring 2020
INFSCI 0010	Intro to Information, Systems, & Society	Spring 2020
INFSCI 1061	Game Implementation	Spring 2019
CS 0449	Intro to Systems Software	Spring 2019
CS 0401	Intermediate Programming with Java	Fall 2018
CS 0007	Intro to Programming with Java	Fall 2018
CS 0008	Intro to Programming with Python	Spring 2018
CS 0007	Intro to Programming with Java	Spring 2018
CS 0401	Intermediate Programming with Java	Fall 2017
CS 0007	Intro to Programming with Java	Fall 2017
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

PUBLICATIONS

PAPERS

Which part makes it work? Mechanism exploration through feature comparison in a healthcare-related serious game
Pat Healy, Isabelle Malizio, Angeline Pho, Kai-Lin You, Andrew Xu, Teresa Hagan Thomas, Dmitriy Babichenko.
IEEE International Conference on Serious Games and Applications for Health (2025).

AWARDED THE BEST PAPER AWARD AT SEGAH 2025

Evaluation of the Online First Pathways Program for Equity-denied Families: A Randomized Controlled Trial
Jelena Komanchuk, Nicole Letourneau, Linda Duffett-Leger, Pat Healy, Madison Very, Ziyue Huang, Zhaoyang Zheng, Judy Cameron. *Journal of Child and Family Studies* (2024). DOI:10.1007/s10826-024-02932-w

What Matters to Patients: Community-Engaged Design for Healthcare-Related Serious Games
Pat Healy, Andrew Xu, Angeline Pho, Kai-Lin You, Dmitriy Babichenko, Isabelle Malizio, Teresa Hagan Thomas.
European Conference on Game-Based Learning (2024).

Comparing the Use of Controllers and Hand Tracking in a Virtual Reality Nerve Block Simulation
Pat Healy, Dmitriy Babichenko, Steven Orebaugh, Mackenzie Noonan Haase, Zachary Fuller.
IEEE International Conference on Serious Games and Applications for Health (2024).

An Exposure-Based Video Game (Dr. Zoo) to Reduce Needle Phobia in Children Aged 3 to 6 Years: Development and Mixed Methods Pilot Study
Pat Healy, Celine Lu, Jennifer S Silk, Oliver Lindhiem, Reagan Harper, Abhishek Viswanathan, Dmitriy Babichenko.
JMIR Serious Games (2023). DOI:10.2196/42025

Enter the Paraverse: Challenging Assumptions of Live Music in the Metaverse
Pat Healy, Hannah Standiford.
European Conference on Game-Based Learning (2023). DOI:10.34190/ecgbl.17.1.1634

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)

Development and Testing of a Curriculum to Improve Decision-Making Skills in Middle and High School Students

Tricia Shelton, Corinne Benatowicz, Pat Healy, Neal D. Ryan, Judy L. Cameron
Mind, Brain, and Education. DOI:10.1111/mbe.12339

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

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

Approaches to Evaluating Healthcare-Related Serious Games

Pat Healy, Kai Lin You, Andrew Xu, Theresa H. Thomas, Dmitriy Babichenko.
Serious Play Conference, Toronto, Ontario, October 12th, 2023.

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.

EXTRACURRICULARS & SERVICE

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

- Organized Games 4 Social Impact 2024, Games 4 Social Impact 2023, Games 4 Social Impact 2022, Games 4 SocialImpact 2021 and the Oakland Homeschool Jam. Currently preparing for Games 4 Social Impact 2025!

Graduate Worker Organizing Committee | Summer 2019 - Summer 2025

- Coordinated the committee advocating for social justice causes with fellow graduate students, organizing public demonstrations and regular meetings

School of Computing and Information DEI Committee | Fall 2021 - Fall 2024

- Acting as student representative to advocate for equitable representation of historically-underrepresented groups in my school
- This committee dissolved in 2024 due to pressure from the federal government

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

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

AWARDS

Best Paper at IEEE International Conference on Serious Games and Applications for Health | Summer 2025

- Awarded for the paper titled "Which part makes it work? Mechanism exploration through feature comparison in a healthcare-related serious game," which I presented and served as first author on.

Catherine Ofesh and Gerald Orner Award | Spring 2024

- Awarded by Pitt's School of Computing and Information for academic success and excellence in published works of information science research.

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

PROFICIENCIES

PROGRAMMING

C# • Python • Java • PHP • Ruby • JS • HTML/CSS/Bootstrap

GAME ENGINES/TOOLS

Unity • Ren'Py • Godot • Twine • Unreal Engine

CONTENT CREATION

Premiere Pro • Photoshop • After Effects • Audition

You can find my portfolio on my website, patwhealy.com

References available upon request.