Matthew Guzdial — Assistant Professor, University of Alberta

CONTACT INFORMATION

Department of Computing Science
University of Alberta
Edmonton, Alberta
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RESEARCH AREAS

My research focuses on creative artificial intelligence and machine learning, investigating ways computational representations of creativity can benefit machine learning and vice versa. This includes research into transfer learning, explainable AI, and automated video game design.

EDUCATION

Georgia Institute of Technology

Ph.D. in Computer Science **2019**
Dissertation: "Combinational Machine Learning Creativity"
Ph.D. Committee: Mark Riedl (chair), Ashok Goel, Charles Isbell, Brian Magerko, Michael Mateas, and Devi Parikh

B.S. Computational Media with Honors **2014**
Certificate in Social Psychology

PUBLICATIONS

Journals

1. Conceptual Game Expansion. Matthew Guzdial and Mark Riedl, IEEE Transactions on Games, 2021.
2. Procedural Content Generation via Machine Learning (PCGML). Adam Summerville, Sam Snodgrass, Matthew Guzdial, Christoffer Holmgård, Amy K. Hoover, Aaron Isaksen, Andy Nealen, and Julian Togelius, IEEE Transactions on Games, 2018.

Conferences

3. Threshold Designer Adaptation: Improved Adaptation for Designers in Co-creative Systems. Emily Halina, and Matthew Guzdial, International Joint Conference on Artificial Intelligence (IJCAI), Special Track: AI, the Arts, and Creativity, 2022.
4. Explaining Deep Reinforcement Learning Agents in the Atari Domain through a Surrogate Model. Alexander Sieusahai, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Nominated for Best Student Paper Award, Acceptance Rate: 29%, 2021.
5. The Definition-Context-Purpose Paradigm and Other Insights from Industry Professionals about the Definition of a Quest. Kristen K. Yu, Nathan R. Sturtevant, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Nominated for Best Student Paper Award, Acceptance Rate: 29%, 2021.
6. Tile Embedding: A General Representation for Level Generation. Mrunal Jadhav, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Nominated for Best Student Paper Award, Acceptance Rate: 29%, 2021.
7. The Impact of Visualizing Design Gradients for Human Designers. Matthew Guzdial, Nathan Sturtevant, and Carolyn Yang, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 29%, 2021.
8. Towards Disambiguating Quests as a Technical Term. Kristen K. Yu, Nathan R. Sturtevant, and Matthew Guzdial, Foundations of Digital Games (FDG), Acceptance Rate: 38%, 2021.
9. Adversarial Random Forest Classifier for Automated Game Design. Thomas Maurer, and Matthew Guzdial Foundations of Digital Games (FDG), Acceptance Rate: 38%, 2021.

10. The Unexpected Consequence of Incremental Design Changes. Nathan R. Sturtevant, Nicolas Decroocq, Aaron Tripodi, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Nominated for Best Paper Award, Acceptance Rate: 25%, 2020.
11. Making CNNs for Video Parsing Accessible. Zijin Lou, Matthew Guzdial, and Mark Riedl, Foundations of Digital Games (FDG), Acceptance Rate: 37%, 2019.
12. Combinets: Creativity via Recombination of Neural Networks. Matthew Guzdial, and Mark Riedl, International Conference on Computational Creativity (ICCC), Best Paper Award, Acceptance Rate: 42%, 2019.
13. Friend, Collaborator, Student, Manager: How Design of an AI-Driven Game Level Editor Affects Creators. Matthew Guzdial, Nicholas Liao, Jonathan Chen, Shao-Yu Chen, Shukan Shah, Vishwa Shah, Joshua Reno, Gillian Smith, and Mark Riedl, Conference on Human Factors in Computing Systems (CHI), Acceptance Rate: 23.8%, 2019.
14. Player Experience Extraction from Gameplay Video. Zijin Lou, Matthew Guzdial, and Mark Riedl, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 25%, 2018.
15. Automated Game Design via Conceptual Expansion. Matthew Guzdial, and Mark Riedl, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 25%, 2018.
16. Creative Invention Benchmark. Matthew Guzdial, Nicholas Liao, Vishwa Shah, and Mark Riedl, International Conference on Computational Creativity (ICCC), Acceptance Rate: 39%, 2018.
17. Game Engine Learning from Video. Matthew Guzdial, Boyang Li, and Mark Riedl, International Joint Conference on Artificial Intelligence (IJCAI), Acceptance Rate: 26%, 2017.
18. Evaluating Singleplayer and Multiplayer in Human Computation Games. Kristin Siu, Matthew Guzdial, and Mark Riedl, International Conference on the Foundations of Digital Games (FDG), Acceptance Rate: 40%, 2017.
19. Game Level Generation from Gameplay Video. Matthew Guzdial, and Mark Riedl, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 25%, 2016.
20. Learning to Blend Computer Game Levels. Matthew Guzdial, and Mark Riedl, International Conference on Computational Creativity (ICCC), Best Paper Award, Acceptance Rate: 39%, 2016.
21. Crowdsourcing Open Interactive Narrative. Matthew Guzdial, Brent Harrison, Boyang Li, and Mark Riedl, International Conference on the Foundations of Digital Games (FDG), Acceptance Rate: 40%, 2015.

Book Chapters: Refereed

22. Modeling Individual Humans via a Secondary Task Transfer Learning Method. Anmol Mahajan and Matthew Guzdial, Federated and Transfer Learning, Springer, 2022.

Conference Posters

23. Arachnophobia Exposure Therapy using Experience-driven Procedural Content Generation via Reinforcement Learning (EDPCGRL). Athar Mahmoudi-Nejad, Matthew Guzdial, and Pierre Boulanger, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 50%, 2021.
24. Conceptual Expansion Neural Architecture Search (CENAS). Mohan Sai Singamsetti, Anmol Mahajan, and Matthew Guzdial, International Conference on Computational Creativity (ICCC), 2021.
25. Image-to-Level: Generation and Repair. Eugene Chen, Christoph Sydora, Brad Burega, Anmol Mahajan, Abdullah Abdullah, Matthew Gallivan, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), Acceptance Rate: 50%, 2020.
26. Deep Convolutional Player Modeling on Log and Level Data. Nicholas Liao, Matthew Guzdial, and Mark Riedl, International Conference on the Foundations of Digital Games (FDG), 2017.

Workshops

27. TaikoNation: Patterning-focused Chart Generation for Rhythm Action Games. Emily Halina, and Matthew Guzdial, FDG Workshop on Procedural Content Generation (PCG), 2021.
28. Toward Co-creative Dungeon Generation via Transfer Learning. Zisen Zhou, and Matthew Guzdial, FDG Workshop on Procedural Content Generation (PCG), 2021.
29. Generating Lode Runner Levels by Learning Player Paths with LSTMs. Kynan Sorochan, Jerry Chen, Yakun Yu, and Matthew Guzdial, FDG Workshop on Procedural Content Generation (PCG), 2021.
30. Generating Gameplay-Relevant Art Assets with Transfer Learning. Adrian Gonzalez, Matthew Guzdial, and Felix Ramos, AIIDE Workshop on Experimental AI in Games (EXAG), 2020.
31. Explainability via Responsibility. Faraz Khadivpour, and Matthew Guzdial, AIIDE Workshop on Experimental AI in Games (EXAG), 2020.
32. Entity Embedding as Game Representation. Nazanin Yousefzadeh Khameneh, and Matthew Guzdial, AIIDE Workshop on Experimental AI in Games (EXAG), 2020.
33. Tabletop Roleplaying Games as Procedural Content Generators. Matthew Guzdial, Devi Acharya, Max Kreminski, Michael Cook, Antonios Liapis, and Anne Sullivan, FDG Workshop on Procedural Content Generation (PCG), 2020.
34. Automated Let's Play Commentary. Shukan Shah, Matthew Guzdial, and Mark Riedl, AIIDE Workshop on Experimental AI in Games (EXAG), 2019.
35. An Interaction Framework for Studying Co-Creative AI. Matthew Guzdial, Nicholas Liao, and Mark Riedl, CHI Human-Centered Machine Learning Perspectives (HCMLP) Workshop, 2019.
36. Co-Creative Level Design via Machine Learning. Matthew Guzdial, Nicholas Liao, and Mark Riedl, AIIDE Workshop on Experimental AI in Games (EXAG), 2018.
37. Towards Automated Let's Play Commentary. Matthew Guzdial, Shukan Shah, and Mark Riedl, AIIDE Workshop on Experimental AI in Games (EXAG), 2018.
38. Explainable PCGML via Game Design Patterns. Matthew Guzdial, Joshua Reno, Jonathan Chen, Gillian Smith, and Mark Riedl, AIIDE Workshop on Experimental AI in Games (EXAG), 2018.
39. Combinatorial Creativity for Procedural Content Generation via Machine Learning. Matthew Guzdial, and Mark Riedl, AAAI Workshop on Knowledge Extraction from Games (KEG), 2018.
40. Combinatorial Meta Search. Matthew Guzdial, and Mark Riedl, NIPS Workshop on Machine Learning Creativity and Design (MLCD), 2017.
41. Visual Procedural Content Generation with an Artificial Abstract Artist. Matthew Guzdial, Duri Long, Christopher Cassion, and Abhishek Das, ICCC Workshop on Computational Creativity in Games (CCG), 2017.
42. Learning Player Tailored Content from Observation: Platformer Level Generation from Video Traces using LSTMs. Adam Summerville, Matthew Guzdial, Michael Mateas, and Mark Riedl, AIIDE Workshop on Experimental AI in Games (EXAG), 2017.
43. Deep Static and Dynamic Level Analysis: A Study on Infinite Mario. Matthew Guzdial, Nathan Sturtevant and Boyang Li, AIIDE Workshop on Experimental AI in Games (EXAG), 2016.
44. Toward Game Level Generation from Gameplay Videos. Matthew Guzdial, and Mark Riedl, FDG Workshop on Procedural Content Generation in Games (PCG), 2015.

Peer Reviewed Demos

45. A Demonstration of KiaiTime: A Mixed-Initiative PCGML Rhythm Game Editor. Emily Halina, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2021.

46. A Tool for Generating Monster Silhouettes with a Word-Conditioned Variational Autoencoder. Adrian Gonzalez, Matthew Guzdial, Felix Ramos, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2021.
47. A Demonstration of Mechanic Maker: An AI for Mechanics Co-Creation. Vardan Saini, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2020.
48. A Demonstration of Anhinga: A Mixed-Initiative EPCG Tool for Snakebird. Nathan Sturtevant, Nicolas Decroocq, Aaron Tripodi, Carolyn Yang, and Matthew Guzdial, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2020.
49. Integrating Automated Play in Level Co-Creation. Andrew Hoyt, Matthew Guzdial, Yalini Senthil Kumar, Gillian Smith, and Mark Riedl, Experimental AI in Games Workshop (EXAG), 2019.
50. A General Level Design Editor for Co-creative Level Design. Matthew Guzdial, Jonathan Chen, Shao-Yu Chen, and Mark Riedl, Experimental AI in Games Workshop (EXAG), 2017.
51. Conceptually Blended Levels in a Unity Engine. Matthew Guzdial, and Mark Riedl, Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2015.
52. An Intelligent Game Level Design Editor Informed by Gameplay Videos. Matthew Guzdial, and Mark Riedl, Experimental AI in Games Workshop (EXAG), 2015.

Other

53. Explainable AI for Designers. Jichen Zhu, Rafael Bidarra, Alex J. Champandard, Simon Colton, Reynald Francois, Matthew Guzdial, Amy K. Hoover, Antonios Liapis, Sebastian Risi, Gillian Smith, Anne Sullivan, and G Michael Youngblood, Dagstuhl Seminar 1747: Artificial and Computational Intelligence in Games: AI-Driven Game Design, 2018.
54. AI As Reflective Practice. Gillian Smith, Mirjam P. Eladhari, Matthew Guzdial, Emily Short, Adam M. Smith, Anne Sullivan, Tommy Thompson, and R Michael Young, Dagstuhl Seminar 1747: Artificial and Computational Intelligence in Games: AI-Driven Game Design, 2018.
55. AI-assisted Board Game Play. Antonios Liapis, Michael Cook, Steve Dahlskog, Mirjam P. Eladhari, Matthew Guzdial, Emily Short, Gillian Smith, Anne Sullivan, and Tommy Thompson, Dagstuhl Seminar 1747: Artificial and Computational Intelligence in Games: AI-Driven Game Design, 2018.
56. What is Machine Learning/Deep Learning. Matthew Guzdial, Joshua A. McCoy, and Jichen Zhu, Dagstuhl Seminar 1747: Artificial and Computational Intelligence in Games: AI-Driven Game Design, 2018.

FUNDING/GRANTS

BNS Number RMA-23: Interpreting Deep Neural Networks (Scotiabank) **1/22-12/23**
Co-PI: Guzdial, 100,000 awarded, **30,000** for Guzdial lab

NSERC Discovery Grant: Machine Learning and Creativity **4/20-3/25**
PI: Guzdial, **145,000 CAD** awarded

NSERC Early Career Researcher Discovery Launch Supplement **4/20-3/25**
PI: Guzdial, **12,500 CAD** awarded

CIFAR AI Chair **9/19-6/23**
PI: Guzdial, **350,000 CAD** awarded

MITACS Accelerate: AI Aide for Financial Goal Setting **5/20-7/21**
PI: Guzdial, **35,000 CAD** awarded

Invited Talks and Panels

Toronto Machine Learning Society (TMLS)	**2021**
Invited Talk: “Modeling Individuals Without Data via a Secondary Task Transfer Learning Method"	
Game Developer’s Conference (GDC): AI Summit	**2021**
Tobias Moller, Vanessa Volz, Nick Walton, Prithviraj Ammanabrolu, Matthew Guzdial, Rehaf Jammaz, and Elisabeth Oliver	
Panel: “Experimental AI Workshop"	
Royal Canadian Institute for Science and the Institute for Science, Society and Policy Panel	**2021**
David Cropleey, Matthew Guzdial, and Val Walker	
Panel: “Bridging Human Creativity and Machine Learning"	
Foundations of Digital Games	**2020**
Mirjam P. Eladhari, Matthew Guzdial, Antonios Liapis, and Anne Sullivan	
Panel: “Games as Story Generators"	
Faculty of Arts, Celebration of Research, University of Alberta	**2020**
Astrid Ensslin, Matthew Guzdial, Chelsea Miya, Kyle Stooshnov, and Morgan Cselinacz	
Invited Talk: “Digital Synergies and the Quest to Decode Human Bias in Computation"	
DragonCon	**2019**
Anne Sullivan, Henrik Warpefelt, and Matthew Guzdial	
Panel: “Love and Hate for Games AI"	
University of Southern California	**2018**
Invited Talk: “Automated Game Generation via Machine Learning”	
Unite Los Angeles: Unity Developer Conference (Unite)	**2018**
Invited Talk: “Using Machine Learning to Enhance Content Production Workflows”	
Blizzard	**2017**
Invited talk: “Procedural Content Generation via Machine Learning”	
Foundations of Digital Games	**2017**
Amy Hoover, Matthew Guzdial, Adam Summerville, and Alexander Zook	
Panel: “Machine Learning for Procedural Content Generation”	

Conference / Workshop Organization

ACM Conference on Foundations of Digital Games (FDG) Game AI Track Chair	**2020**
AAAI Conference on Artificial Intelligence in Digital Entertainment (AIIDE) Doctoral Consortium Chair	**2020**
AAAI Conference on Artificial Intelligence in Digital Entertainment (AIIDE) Publicity Chair	**2019**
AAAI Workshop on Knowledge Extraction from Games Chair	**2019**
AAAI Workshop on Knowledge Extraction from Games Chair	**2018**
FDG Workshop on Procedural Content Generation Local Coordinator	**2017**
International Conference on Computational Creativity (ICCC) Media Chair	**2017**
ICCC Workshop on Computational Creativity Chair	**2017**
AIIDE Workshop on Experimental AI in Games Local Coordinator	**2016**

Honors and Awards

Nominee for Best Reviewer Award, AIIDE	**2021**
Nominee for Best Student Paper Award, AIIDE	**2021**

Nominee for Best Student Paper Award, AIIDE	**2021**
Nominee for Best Student Paper Award, AIIDE	**2021**
Nominee for Best Paper Award, AIIDE	**2020**
Early Career Researcher Discovery Launch Supplement, NSERC	**2020**
Best Paper Award, ICCC Conference	**2019**
Influential Work of the Past Ten Years Paper Award, PCG Workshop	**2019**
Best Program Committee Member Award, AIIDE Conference	**2018**
Foley Scholar Finalist	**2018**
Heidelberg Laureate Forum Young Researcher	**2018**
Unity Graduate Fellowship	**2018**
Dagstuhl Seminar 1747 Participant	**2017**
Foley Scholar Finalist	**2017**
Best Paper Award, ICCC Conference	**2016**
National Science Foundation Graduate Student Fellowship Honorable Mention	**2015**
Georgia Tech College of Computing Best Undergraduate Research Award	**2013**
Georgia Tech President's Undergraduate Research Award	**2013**

Code and Data Usage

My code and data, available via github and my personal website, has been applied to research at Cornell University, University of Washington, Drexel University, Northeastern University, Worcester Polytechnic University, the University of California, Davis, and the University of California, Santa Cruz.

Select Reviewing and Program Committee Membership

AAAI Conference on Artificial Intelligence (AAAI) 2020-2021.
AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2016-2021.
ACM CHI Conference on Human Factors in Computing Systems (CHI), 2017-2022.
AIIDE Experimental AI in Games Workshop (EXAG), 2016-2021.
FDG Workshop on Procedural Content Generation (PCG), 2016-2021.
IEEE Conference on Games (COG), 2018-2022.
International Conference on Computational Creativity (ICCC), 2017-2022.
International Conference on the Foundations of Digital Games (FDG), 2017-2022.
International Joint Conference on Artificial Intelligence (IJCAI), 2018-2022.
IEEE Transactions on Games (TOG), 2017-2022.

Teaching

University of Alberta **2020-**

Term	**Course**	**Overall Evaluation**
Winter 2022	Game AI	4.9 / 5.0
Winter 2022	Games Capstone	
Fall 2021	Game AI	4.9 / 5.0
Winter 2021	PCG via Machine Learning	
Fall 2020	Game AI	4.9 / 5.0
Winter 2020	Game AI	4.8 / 5.0
Winter 2020	PCG via Machine Learning	

Georgia Institute of Technology **2014-2019**

Term	**Course**	**Instructor Effectiveness**
Spring 2018	Machine Learning	4.82 / 5.0
Summer 2017	Game AI	4.95 / 5.0

University of Alberta **2019-**

Co-designed new Game AI undergraduate course, designed PCG via ML graduate course, three time instructor of record.

Georgia Institute of Technology **2014-2019**
Co-designed new Game AI course, two-time Instructor of Record (Machine Learning and Game AI), and Teaching Assistant

Georgia Institute of Technology **2010-2014**
Teaching Assistant: Game AI

STUDENTS

Current Students

Johor Jara Gonzalez (CS PhD), University of Alberta **2021-**
Athar Mahmoudi-Nejad (CS PhD), University of Alberta (co-supervised) **2021-**
Kristen K. Yu (CS PhD), University of Alberta (co-supervised) **2020-**
Adrian Gonzalez (CS PhD), Cinvestav IPN, Unidad Guadalajara (co-supervised) **2020-**

Dagmar Lofts (CS Masters), University of Alberta **2021-**
Mohan Sai Singamsetti (CS Masters), University of Alberta **2021-**
Thomas Maurer (CS Masters), University of Alberta **2021-**
Anahita Doosti Sanjani (CS Masters), University of Alberta **2021-**
Akash Saravanan (CS Masters), University of Alberta **2021-**
Mrunal Sunil Jadhav (CS Masters), University of Alberta **2021-**
Negar Mirgati (CS Masters), University of Alberta **2022-**

Jawdat Toume (CS Undergrad), University of Alberta **2021-**
Emily Halina* (CS Undergrad), University of Alberta **2021-**
Kynan Sorochan (CS Undergrad), University of Alberta **2021-**
Vardan Saini (CS Undergrad), University of Alberta **2019-**

Graduated Students

Nazanin Yousefzadeh Khameneh (CS Masters), University of Alberta **2021**
Masters Thesis: "Forward Model Learning with an Entity-Based Representation for Games"
Anmol Mahajan (CS Masters), University of Alberta **2021**
Masters Thesis: "Modelling Individual Humans via a Secondary Task Transfer Learning Method"
Shao-Yu Chen (HCI Masters), Georgia Institute of Technology **2016**

Alexander Sieusahai (CS Undergrad), University of Alberta **2021**
Faisal Abutarb* (CS Undergrad), University of Alberta **2020**
Gaganpreet Jhajj (CS Undergrad), University of Alberta **2020**
Yalini Kumar (CS Undergrad), Georgia Institute of Technology **2020**
Andrew Hoyt (CS Undergrad), Georgia Institute of Technology **2020**
Joshua Reno (CS Undergrad), Georgia Institute of Technology **2020**
Zijin Lou† (CS Undergrad), Georgia Institute of Technology **2020**
Shukan Shah† (CS Undergrad), Georgia Institute of Technology **2020**
Vishwa Shah† (CS Undergrad), Georgia Institute of Technology **2020**
Jonathan Chen (CS Undergrad), Georgia Institute of Technology **2018**
Maxwell Bronstein (CS Undergrad), Georgia Institute of Technology **2018**
Kenny Scharm (CS Undergrad), Georgia Institute of Technology **2018**
Nicholas Liao† (CS Undergrad), Georgia Institute of Technology **2017**
Undergraduate Thesis: "Deep Convolutional Player Modeling on Log and Level Data"

* indicates awardees of Undergraduate Student Rresearch Award, a prestigious award through the Natural Sciences and Engineering Research Council
† indicates winners of Presidents Undergraduate Research Award, a prestigious award at the Georgia Institute of Technology

PROFESSIONAL EXPERIENCE

University of Alberta, Edmonton, AB — Assistant Professor **September 2019 -**

SUMMER INTERNSHIPS

Disney Research, Pittsburgh, PA — Research Assistant Intern **May 2016- August 2016**
Applied deep learning to player experience prediction and simulation.

Zynga Inc., Orlando FL - Design Intern **May 2014 - August 2014**
Led weekly bug-fix count across entire team of twenty-six developers.

Zynga Inc., San Francisco, CA - Production Intern **May 2013 - August 2013**
Developed mobile game prototype single-handedly then lead small team in further development.

PRESS

"Synthesis AI raises 17M to generate synthetic data for computer vision" TechCrunch, April 28, 2022. link

"Beethoven's Unfinished 10th Symphony Brought to Life by Artificial Intelligence" Scientific American, October 15, 2021. link

"How Artificial Intelligence Could Help Pro Gamers Create Games They Want To Play" Nerd's Magazine, June 2, 2021. link

"AI and Creativity" PassWord Radio Program on Resonance FM, July 8, 2020. link

"Nvidia Says Its AI Created a 'Fully Functional' Version of Pac-Man" Vice, May 25, 2020. link

"How Artificial Intelligence Could Help Video Gamers Create the Exact Games They Want to Play" Time, February 10, 2020. link

"Inside the Deepfake 'Arms Race" Daily Beast, October 7, 2019. link

"Facebook Wants Gamers to Play Minecraft With Its AI-Powered Bot" Daily Beast, September 23, 2019. link

"The Wonderful, Weird World of AI Generated Pokemon" Viewport, December 2018. link

"AI makes new video games by watching people play Super Mario and Kirby" New Scientist, October 2018. link

"Video Games Created Using Artificial Intelligence" BBC, September 2018. link

"Forget dumping games designers for AI turns out it takes two to tango" The Register, September 2018. link

"This Video Game Made by AI Looks Fun as Hell" Motherboard, September 2018. link

"An A.I. is designing retro video games and they're surprisingly good" Digital Trends, September 2018. link

"AI learns to re-create Super Mario Bros by watching someone else play it" The Verge, September 2017.

link

“Artificial Intelligence is Learning To Develop Games” Rolling Stone, September 2017. link

“AI System Accurately Replicates Video Games Just by Watching Them” The Seeker, September 2017. link

“New AI can ‘clone’ the basic software that brings a video game to life after watching the original for just TWO MINUTES” Daily Mail, September 2017. link

“Has a Black Mirror episode predicted the future of video games?” The Guardian, October 2016. linkis

“Underwater Castle? This AI Creates Never-Before-Seen ‘Super Mario Bros.’ Level” Motherboard, March 2016. link

“How Computers Learned to Play Mario” Smithsonian Magazine, November 2015. link

“Algorithm Turns Fiction into Interactive Games” Popular Science, September 2015. link

“This AI Creates Interactive Fiction by Reading Other People’s Stories” Motherboard, September 2015. link

“This AI Builds Super Mario Levels by Watching YouTube” WIRED, June 2015. link