Stephen G. Ware, Ph.D.

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Biography

Stephen G. Ware, Ph.D. is an Assistant Professor of Computer Science at the University of Kentucky where he directs the Narrative Intelligence Lab and teaches courses on artificial intelligence and game development.

Prof. Ware's research applies AI techniques to model and reason about narratives, especially generating and adapting stories in interactive virtual environments such as video games, training simulations, and tutoring systems. His work has earned three best paper awards to date. Since 2014, Prof. Ware has received over $850,000 in sponsored research funding from federal, state, and local agencies, including over $600,000 from the National Science Foundation, where he has served as a panelist.

Prof. Ware has served as a referee for the *IEEE Transactions on Games* journal since 2013. He has also served as organizer or program committee member for top conferences and workshops in his field, including the AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, International Conference on Intelligent Virtual Agents, International Conference on Interactive Digital Storytelling, Foundations of Digital Games, Intelligent Narrative Technologies, Computational Models of Narrative, Association for the Advancement of Artificial Intelligence, and the International Joint Conference on Artificial Intelligence.

Research Interests

- artificial intelligence
- computational models of narrative
- fast multi-agent planning
- plan recognition
- entertaining and educational games
- human computer interaction
- computational cognitive science
- narrative theory

Professional Experience

Fall 2019 to Present	Assistant Professor Director, Narrative Intelligence Lab University of Kentucky, Department of Computer Science

Fall 2014 to Summer 2019	Assistant Professor Director, Narrative Intelligence Lab University of New Orleans, Department of Computer Science
Summer 2013	Instructor North Carolina State University, Department of Computer Science
Fall 2009 to Summer 2014	Research Assistant North Carolina State University, Department of Computer Science
Summer 2009	Instructor North Carolina State University, Department of Computer Science
Fall 2008 to Spring 2009	Teaching Assistant North Carolina State University, Department of Computer Science
Summer 2007	Software Engineer, Intern DAXCO Inc. Birmingham AL, USA

Education

North Carolina State University Raleigh NC, USA

June 2014	Doctor of Philosophy in Computer Science Thesis: *A Plan-Based Model of Conflict for Narrative Reasoning and Generation* Advisor: Professor R. Michael Young
May 2011	Master of Science in Computer Science, GPA 4.0 / 4.0

Loyola University New Orleans New Orleans LA, USA

May 2008	Bachelor of Science, Summa Cum Laude with University Honors, GPA 4.0 / 4.0 Majors in Computer Science and Philosophy Thesis: *Merlin's Bear and Odin's Eye: A Survey of the Wizard Archetype in Literature, Opera, and Cinema.* Advisor: Professor William T. Cotton, English Department

Awards and Honors

January, 2019	*Early Career Creativity, Research, and Scholarship Award* University of New Orleans

October, 2017	*Best Program Committee Member* AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment
April, 2017	*Faculty Distinguished Research Award* University of New Orleans Honors Program
December, 2016	*Region 1 Postsecondary Teacher of the Year* Louisiana Association of Computer Using Educators
October 2014	*Best Student Paper* 10th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment
July 2012	*Best Paper* International Conference on Interactive Digital Storytelling
May 2012	*Best Student Paper on a Cognitive Science Topic* Computational Models of Narrative Workshop
April 2010	*Honorable Mention, Graduate Research Fellowship* U.S. National Science Foundation
March 2010	*Outstanding Teaching Assistant* North Carolina State University Graduate Student Association
August 2009	*Dean's Fellowship* North Carolina State University, Department of Computer Science
May 2008	*William T. Cotton Service Award* Loyola University New Orleans
May 2008	*Percy A. Roy S.J. Award for Highest Grade Point Average* Loyola University New Orleans, College of Humanities and Natural Sciences
May 2008	*Outstanding Computer Science Major* Loyola University New Orleans, Dept. of Mathematics and Computer Science
May 2008	*Guy Lemieux S.J. Award for Excellence in Philosophy* Loyola University New Orleans, Department of Philosophy
May 2004	*Ignatian Scholarship* Loyola University New Orleans

Sponsored Research

January 2019 to December 2019
Recognizing the Beliefs and Intentions of Agents Using Narrative Planning
Role: Principal Investigator
University of New Orleans Office of Research and Sponsored Programs
$15,000

January 2019 to December 2019
Early Career Creativity, Research, and Scholarship Award
Role: Principal Investigator
University of New Orleans Office of Research and Sponsored Programs
$7,500

January 2019 to December 2019
Foreseeing, Recognizing, and Influencing Possible Futures Using Multi-Agent Planning Algorithms
Role: Principal Investigator, subcontract to North Carolina State University
Laboratory for Analytic Sciences
$80,543

January 2018 to December 2018
Fast, Strong-Story BDI Planning for Intelligent Virtual Narratives
Role: Principal Investigator
University of New Orleans Office of Research and Sponsored Programs
$14,765

July 2017 to July 2019
CC Network Design: ARCHES (Advanced Research Computing in the Humanities Engineering and Sciences) Network at the Univ. of New Orleans*
Role: Co-Principal Investigator
US National Science Foundation
$335,000

August 2016 to July 2017
EAGER: Planning Believable Narratives by Modeling Agent Beliefs
Role: Principal Investigator
US National Science Foundation
$156,969

May 2017 to June 2017
Salience-Based Drama Management: A Pilot Study
Role: Principle Investigator
University of New Orleans College of Sciences
$10,051

July 2016 to June 2017
Bringing Use-of-Force Training Simulations into Virtual Reality
Role: Principal Investigator
University of New Orleans Office of Research and Sponsored Programs
$14,982

November 2015 to June 2016
Intelligent Planning of Interactive Narratives to Teach Best Practices
Role: Principal Investigator
University of New Orleans Office of Research and Sponsored Programs
$20,000

May 2015 to Present	*CRII: CHS: Structuring Narratives in Interactive Virtual Environments Using Computational Models of Possible Worlds* Role: Principal Investigator US National Science Foundation $138,436
May 2015 to May 2016	*Creating an Interdisciplinary Digital Media Laboratory* Role: Principal Investigator Louisiana Board of Regents, Enhancement Program $110,042
May 2015 to August 2015	*Reading Rocket: A Game-Based Reading Level Test for Children Based on Stealth Assessment* Role: Principal Investigator University of New Orleans Office of Research and Sponsored Programs $11,800

Publications

Manuscripts of all publications can be found at `http://cs.uky.edu/~sgware`.

Refereed Journal Articles

[1] Rachelyn Farrell and Stephen G. Ware, "Manipulating narrative salience in interactive stories using Indexter's Pairwise Event Salience Hypothesis," *IEEE Transactions on Games*, 2019. (forthcoming)

[2] Stephen G. Ware, R. Michael Young, "Intentionality and conflict in *The Best Laid Plans* interactive narrative virtual environment," *IEEE Transactions on Computational Intelligence and Artificial Intelligence in Games*, vol. 8, num. 4, pp. 402-411, 2015.

[3] Brent Harrison, Stephen G. Ware, Matthew William Fendt, and David L. Roberts, "A survey and analysis of techniques for player behavior prediction in massively multiplayer online games," *IEEE Transactions on Emerging Topics in Computing Special Issue on MMO Technologies*, vol. 3, num. 2, pp. 260-274, 2014.

[4] Stephen G. Ware, R. Michael Young, Brent Harrison, and David L. Roberts, "A computational model of narrative conflict at the fabula level," *IEEE Transactions on Computational Intelligence and Artificial Intelligence in Games*, vol. 6, num. 3, pp. 271-288, 2014.

[5] R. Michael Young, Stephen G. Ware, Bradly A. Cassell, and Justus Robertson, "Plans and planning in narrative generation: a review of plan-based approaches to the generation of story, discourse, and interactivity in narratives," *SDV. Sprache und Datenverarbeitung, Special Issue on Formal and Computational Models of Narrative,* vol. 37, num. 1-2, pp. 41-64, 2013.

Refereed Journal Articles in Preparation and Under Review

[1] Rachelyn Farrell, Alireza Shirvani, and Stephen G. Ware, "Narrative planning with intention and belief," *Journal of Artificial Intelligence Research*.

Refereed Conference Papers

[1] Stephen G., Ware, Edward T. Garcia, Alireza Shirvani, and Rachelyn Farrell, "Multi-agent narrative experience management as story graph pruning," in *Proceedings of the 15th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, 2019. (forthcoming) 25% acceptance rate

[2] Alireza Shirvani and Stephen G. Ware, "A plan-based personality model for story characters," in *Proceedings of the 15th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, 2018. (full paper presented as poster, forthcoming) 49% acceptance rate

[3] Edward T. Garcia, Stephen G. Ware, and Lewis J. Baker. "Measuring presence and performance in an intelligent virtual reality police use of force training simulation prototype," in *Proceedings of the 32nd AAAI International Conference of the Florida Artificial Intelligence Research Society*, pp. 276-281, 2019. XX% acceptance rate

[4] Alireza Shirvani, Rachelyn Farrell, and Stephen G. Ware, "Combining intentionality and belief: revisiting believable character plans," in *Proceedings of the 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 222-228, 2018. (full paper presented as poster) 50% acceptance rate

[5] Alireza Shirvani, Stephen G. Ware, and Rachelyn Farrell. "A possible worlds model of belief for state-space narrative planning," in *Proceedings of the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 101-107, 2017. 25% acceptance rate

[6] Rachelyn Farrell, Stephen G. Ware. "Causal link semantics for narrative planning using numeric fluents," in *Proceedings of the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 193-199, 2017. (full paper presented as poster) 50% acceptance rate

[7] Rachelyn Farrell and Stephen G. Ware. "Influencing user choices in interactive narratives using Indexter's Pairwise Event Salience Hypothesis," in *Proceedings of the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, 2017. 25% acceptance rate

[8] Rachelyn Farrell and Stephen G. Ware, "Predicting user choices in interactive narratives using Indexter's pairwise event salience hypothesis," in *Proceedings of the 9th International Conference of Interactive Digital Storytelling*, pp. 147-155, 2016. 36% acceptance rate

[9] Rachelyn Farrell, Scott Robertson, and Stephen G. Ware, "Asking hypothetical questions about stories using QUEST," in *Proceedings of the 9th International Conference of Interactive Digital Storytelling*, pp. 136-146, 2016. 36% acceptance rate

[10] Rachelyn Farrell and Stephen G. Ware, "Fast and diverse narrative planning through novelty pruning," in *Proceedings of the 12th AAAI International Conference of Artificial Intelligence and Interactive Digital Entertainment*, pp. 37-43, 2016. 28% acceptance rate

[11] Christopher Kives, Stephen G. Ware, and Lewis J. Baker, "Evaluating the Pairwise Event Salience Hypothesis in *Indexter*," in *Proceedings of the 11th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 30-36, 2014. 28% acceptance rate

[12] Stephen G. Ware and R. Michael Young, "Glaive: a state-space narrative planner supporting intentionality and conflict," in *Proceedings of the 10th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 80-86, 2014 (awarded Best Student Paper). 26% acceptance rate

[13] Rogelio E. Cardona-Rivera, Justus Robertson, Stephen G. Ware, Brent Harrison, David L. Roberts, and R. Michael Young, "Foreseeing meaningful choices," in *Proceedings of the 10th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 9-15, 2014. 26% acceptance rate

[14] Stephen G. Ware, R. Michael Young, Brent Harrison, and David L. Roberts, "Four quantitative metrics describing narrative conflict," in *Proceedings of the 5th International Conference on Interactive Digital Storytelling*, pp. 18-29, 2012. 29% acceptance rate

[15] Matthew William Fendt, Brent Harrison, Stephen G. Ware, Rogelio E. Cardona-Rivera, and David L. Roberts, "Achieving the illusion of agency," in *Proceedings of the 5th International Conference on Interactive Digital Storytelling*, pp. 114-125, 2012 (awarded Best Paper). 29% acceptance rate

[16] Stephen G. Ware and R Michael Young, "Validating a plan-based model of narrative conflict," in *Proceedings of the International Conference on the Foundations of Digital Games*, pp. 220-227, 2012. 29% acceptance rate

[17] Stephen G. Ware and R. Michael Young, "CPOCL: a narrative planner supporting conflict," in *Proceedings of the 7th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 97-102, 2011. 35% acceptance rate

[18] Stephen G. Ware and R. Michael Young, "Modeling narrative conflict to generate interesting stories," in *Proceedings of the 6th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 210-215, 2010. (full paper presented as poster) 33% acceptance rate

Refereed Workshop and Consortium Papers

[1] Stephen G. Ware, "Mutual Implicit Question Answering for shared authorship: a pilot study on player expectations," in *Proceedings of the 10th Intelligent Narrative Technologies Workshop at the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 259-265, 2017.

[2] Stephen G. Ware, "The Intentional Fast-Forward narrative planner," in *Proceedings of the 5th Intelligent Narrative Technologies Workshop at the 8th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 57-62, 2012.

[3] Rogelio E. Cardona-Rivera, Bradley A. Cassell, Stephen G. Ware and R. Michael Young, "Indexter: a computational model of the Event-Indexing Situation Model for characterizing narratives," in *Proceedings of the 3rd Workshop on Computational Models of Narrative at the Language Resources and Evaluation Conference*, pp. 34-43, 2012 (awarded Best Student Paper on a Cognitive Science Topic).

[4] Stephen G. Ware, Brent Harrison, R. Michael Young, and David L. Roberts, "Initial results for measuring four dimensions of narrative conflict," in *Proceedings of the 4th Workshop on Intelligent Narrative Technologies at the 7th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 115-122, 2011.

[5] Stephen G Ware, "A computational model of narrative conflict," Doctoral Consortium at the *International Conference on the Foundations of Digital Games*, 2011.

[6] Stephen G. Ware and R. Michael Young, "Rethinking traditional planning assumptions to facilitate narrative generation," in *Proceedings of the AAAI Fall Symposium on Computational Models of Narrative*, pp. 71-72, 2010.

Refereed Book Chapters

[1] Stephen G. Ware, "An introduction to Graph Theory," *Practical Graph Mining with R.* CRC Press, pp. 9-26, 2012.

[2] Brent Harrison, Jason Smith, Stephen G. Ware, "Frequent subgraph mining," *Practical Graph Mining with R.* CRC Press, pp. 181-221, 2013.

Refereed Demonstrations

[1] Ben Samuel, Aaron Reed, Emily Short, Samantha Heck, Barrie Robison, Landon Wright, Terence Soule, Mike Treanor, Joshua McCoy, Anne Sullivan, Alireza Shirvani, Edward Garcia, Rachelyn Farrell, Stephen Ware, Katherine Compton, "Playable experiences at AIIDE 2018," in *Proceedings of the 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 275-280, 2018.

[2] Nathan R. Sturtevant, Jeff Orkin, Robert Zubek, Michael Cook, Stephen G. Ware, Christian Stith, R. Michael Young, Phillip Wright, Squirrel Eiserloh, Alejandro Ramirez-Sanabria, Vadim Bulitko, Kieran Lord, "Playable experiences at AIIDE 2014," in *Proceedings of the 10th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 203-209, 2014.

Software Demonstrations

[1] Stephen G. Ware, R. Michael Young, Christian Stith, and Phillip Wright, "Interactive narrative planning in *The Best Laid Plans*," in *Proceedings of the 29th Association for the Advancement of Artificial Intelligence Conference*, Virtual Agents Demonstrations, 2015.

Non-Refereed Publications

[1] Stephen G. Ware, R. Michael Young, Christian Stith, Phillip Wright, "Interactive Narrative Planning in *The Best Laid Plans*," in *Proceedings of the AI Open House at the 29th Conference of the Association for the Advancement of Artificial Intelligence*, pp. 4313-4314, 2015.

[2] Oliver Gown, Arne Eigenfeldt, Rania Hodhod, Philippe Pasquier, Reid Swanson, Stephen G. Ware, and Jichen Zhu, "Reports on the 2012 AIIDE workshops," *AI Magazine*. 2012, vol. 34:1, pp. 90.

[3] Stephen G. Ware, "Crossed swords and broken hearts: a computational model of narrative conflict." Poster, North Carolina State University Graduate Research Symposium. 2012.

Non-Computer Science Publications

[1] Stephen G. Ware, "The Wise Old Man as the archetype of the spirit," *Reader's Response*. Loyola University Press. 2009.

[2] Stephen G. Ware, "Nobody's problem: a response to Thomas Metzinger's *Being No One*," *Elenchos: The Loyola Undergraduate Journal of Philosophy*. 2008.

Professional Organizations

- Association for the Advancement of Artificial Intelligence (member #53757)
- Association for Computing Machinery (member #2211285)
- Institute of Electrical and Electronics Engineers (member #92209981)
- International Game Developers Association (member #22066812)

Professional Service

Funding Panels and Reviews

May 2015	National Science Foundation, CISE Directorate Arlington, VA, USA

Journal Referee

October 2013 to Present	IEEE Transactions on Games (previously IEEE Transactions of Computational Intelligence and Artificial Intelligence in Games)

Conference and Workshop Organization

October 2019 — CamJam: Using the Camelot Virtual Environment, 15th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment
Georgia Institute of Technology, Atlanta GA, USA

October 2018 — Doctoral Consortium Chair, 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment
University of Alberta, Edmonton, Canada

July 2016 — Organizer, 7th Workshop on Computational Models of Narrative
Co-Located with the 2016 Digital Humanities Conference
Kraków, Poland

October 2012 — Organizer, 5th Workshop on Intelligent Narrative Technologies
Co-Located with the 8th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment
Stanford University, Palo Alto CA, USA

Conference and Workshop Program Committees

AAAI Intl. Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE)

- 15th Conference, Georgia Institute of Technology, Atlanta, GA, USA, October 2019
- 14th Conference, Edmonton, Canada 2018
- 13th Conference, Snowbird, UT, USA, October 2017
- 12th Conference, Burlingame, CA, USA, October 2016
- 11th Conference, Univ. of California Santa Cruz, Santa Cruz, CA, USA, November 2015
- 10th Conference, North Carolina State University, Raleigh, NC, USA, October 2014

International Conference on Interactive Digital Storytelling (ICIDS)

- 12th Conference, Snowbird, UT, USA, November 2019
- 10th Conference, Funchal, Madeira, Portugal, November 2017
- 9th Conference, Institute for Creative Technologies, Los Angeles, CA, USA, November 2016
- 5th Conference, Technological Park, San Sebastián, Spain, November 2012

International Conference of the Association for the Advancement of Artificial Intelligence (AAAI)

- 32nd Conference, New Orleans, LA, USA, February 2018

International Joint Conference on Artificial Intelligence (IJCAI)

- 26th Conference, Melbourne, Australia, August 2017

International Conference on Intelligent Virtual Agents (IVA)

- 15th Conference, Delft University of Technology, Delft, The Netherlands, August 2015

IEEE Conference on Games (CoG)

- 1st Conference, London, UK, August, 2019

Foundations of Digital Games Conference (FDG)

- Royal Caribbean Liberty of the Seas, April 2014
- Raleigh, North Carolina, USA, May 2012

Intelligent Narrative Technologies Workshop (INT)

- 11th Workshop, held jointly with Workshop on Intelligent Cinematography and Editing, University of Alberta, Edmonton, AB, Canada, November 2018
- 10th Workshop, Snowbird, UT, USA, October 2017
- 9th Workshop, special track of the 9th International Conference on Interactive Digital Storytelling, Los Angeles, CA, USA, November 2016
- 8th Workshop, University of California Santa Cruz, Santa Cruz, CA, USA, November 2015
- 7th Workshop, University of Wisconsin-Milwaukee, Milwaukee WI, USA, June 2014
- 6th Workshop, Northeastern University, Boston MA, USA, October 2013
- 5th Workshop, Stanford University, Palo Alto CA, USA, October 2012

Computational Models of Narrative Workshop (CMN)

- 7th Workshop, Kraków, Poland, July 2016
- 4th Workshop, University of Hamburg, Berlin, Germany, August 2013

Experimental AI in Games Workshop (EXAG)

- 2910 Workshop, Georgia Institute of Technology, Atlanta, GA, USA, October 2019

Invited Panels

June 2019	Panelist, *Narrative Intelligence in Interactive Storytelling* 1st NarraScope Conference Massachusetts Institute of Technology, Boston, MA, USA
November 2012	Panelist, *Expert Panel* 5th International Conference on Interactive Digital Storytelling Technological Park, San Sebastián, Spain
October 2012	Moderator, *The Near Future of Intelligent Narrative Technologies* 5th Workshop on Intelligent Narrative Technologies Stanford University, Palo Alto CA, USA

February 2012 Panelist, *Two Cultures: Crossing the Divide*
Collaborations: Humanities and Technology Festival
Duke University, Durham NC, USA

Teaching

Classes Taught at the University of Kentucky

CS 485G: Topics in Computer Science (Introduction to Game Development)
Fall 2019: 64 undergraduate

Classes Taught at the University of New Orleans

CSCI 6645: *Planning Algorithms in Artificial Intelligence*
Fall 2017: 5 graduate
Fall 2016: 7 graduate
Fall 2015: 14 graduate (taught as *CSCI 6990: Special Topics*)

CSCI 4525 / 5525: *Introduction to Artificial Intelligence*
Spring 2019: 12 undergraduate, 9 graduate
Spring 2018: 18 undergraduate, 7 graduate
Spring 2017: 11 undergraduate, 6 graduate
Spring 2016: 17 undergraduate, 3 graduate
Spring 2015: 19 undergraduate, 14 graduate

CSCI 4675 / 5675: *Advanced Game Development*
Spring 2018: 5 undergraduate, 4 graduate
Spring 2017: 9 undergraduate
Spring 2016: 7 undergraduate, 3 graduate

CSCI 4670 / 5670: *Fundamentals of Game Development*
Fall 2018: 17 undergraduate, 2 graduate
Fall 2017: 20 undergraduate, 7 graduate
Fall 2016: 13 undergraduate, 2 graduate
Fall 2015: 10 undergraduate, 10 graduate
Fall 2014: 11 undergraduate, 2 graduate

CSCI 1583: Software Design and Development I
Spring 2019: 14 undergraduate
Fall 2018: 32 undergraduate

Classes Taught at North Carolina State University

CSC 316: *Data Structures for Computer Scientists*
Summer 2013: 21 undergraduate

CSC 216: *Programming Concepts – Java*
Summer 2009: 12 undergraduate

Teaching Assistantships and Guest Lectures at North Carolina State University

CSC 522: Automated Learning and Data Analysis (Data Mining)
CSC 565: Graph Theory
CSC 326: Software Engineering
CSC 281: Foundations of Interactive Game Design
CSC 295: Foundations of Game Design

Research Supervised

Doctor of Philosophy, University of Kentucky

Spring 2017 to Present	Alireza Shirvani, as advisor (degree in progress) Topic: Belief in narrative planning
Summer 2015 to Present	Rachelyn Farrell, as advisor (degree in progress) Topic: Fast multi-agent narrative planning in a network of possible worlds.

Master of Science, University of New Orleans

Fall 2015 to Present	Edward Garcia, as advisor *Multi-Agent Narrative Experience Management as Story Graph Pruning*
Spring 2019	Shyla Clark, as committee member *Remote Monitoring of Cherry Wetness Using a Leaf Wetness Sensor and Wireless Sensor Network*
Spring 2016 to Spring 2018	Dustin Peabody, as advisor *Detecting Metagame Shifts in* League of Legends *Using Unsupervised Learning*
Fall 2015 to Spring 2017	Dharmesh Desai, as advisor *Measuring Presence in a Police Use of Force Simulation*
Summer 2015 to Spring 2017	Rachelyn Farrell, as advisor *Predicting User Choices in Interactive Narratives using Indexter's Pairwise Event Salience Hypothesis*

Bachelor of Science, University of New Orleans

Fall 2018 to Spring 2019	Jean-Paul Jeunesse Honors Thesis (forthcoming)
Spring 2018 to Fall 2018	Rishav Rajendra UNO College of Sciences Undergraduate Research Program
Spring 2018 to Fall 2018	Lee Lagarde Privateer Undergraduate Research and Scholarly UNO Experience
Fall 2016 to Spring 2017	Ted Mader Honors Thesis: *Integrating Virtual Reality with Use-of-Force Training Simulations*
Spring 2017	Nicholas Martin UNO College of Sciences Undergraduate Research Program
Spring 2017	Nishan Rayamajhee Privateer Undergraduate Research and Scholarly UNO Experience
Spring 2016	Ashim Sitoula Privateer Undergraduate Research and Scholarly UNO Experience
Spring 2016	Pujan Pokhrel UNO Collage of Sciences Undergraduate Research Program
Spring 2016	Scott Robertson, Hung Le Independent Study
Fall 2015 to Spring 2016	Abhishek Sapkota UNO Collage of Sciences Undergraduate Research Program
Summer 2015	Rodrigo Rodrigues do Carmo, Maurice Robert III *Reading Rocket: A Game-Based Reading Level Test for Children Based on Stealth Assessment*
Summer 2015	Thiago Vieira and Gabriel Miranda Brazil Scientific Mobility Program
Spring 2015	Gabriel Queiroz and Rodrigo Rodrigues do Carmo Independent Study
Spring 2015	Christopher Toups Independent Study

Bachelor of Science, North Carolina State University

Fall 2013	Christian Stith, Phillip Wright
Fall 2012	Eric Lang, Zack Litzsinger
Spring 2011	Evan Kochuk, Courtney Harrison

Institutional Service

University of Kentucky

Summer 2019	Awards Committee, Summer Research Program

University of New Orleans

Fall 2015 to Present	Faculty Advisor International Game Developers Association, Student Chapter
Fall 2015 to Present	Undergraduate Studies Committee Department of Computer Science
Fall 2015	Action Team for the Recruitment and Retention of Active Military & Veterans

North Carolina State University

Spring 2009 to Fall 2010	Tutoring Coordinator for CSC 116: Introduction to Programming STARS Alliance: Students and Technology in Academia, Research, and Service

Loyola University New Orleans

Fall 2006 to Spring 2008	President Loyola University Gaming Society
Fall 2006 to Spring 2007	President Philosophy Club

Research Software

[1] Project Lead, *Reading Rocket*
A data-driven game-based assessment tool for measuring reading level in middle school children.

http://nil.cs.uno.edu/projects/readingrocket

[2] Author, *Glaive Narrative Planner*
A fast multi-agent planner that coordinates cooperative and conflicting agents toward a single goal using only actions consistent with each individual's goals. Integrates intentional domain graphs into Hoffmann's Fast-Forward heuristic for significant speedups on intentional planning problems.
http://nil.cs.uno.edu/projects/glaive

[3] Project Lead and AI Programmer, *The Best Laid Plans*
An adventure game created with the Unity 3D engine in which the story is generated and adapted entirely at run time by multi-agent narrative planning technology.
https://nil.cs.uno.edu/projects/blp

[4] Project Lead, *MOOLA: Multi-User Dungeon Object-Oriented Little Adventures*
A highly-customizable rapid prototyping environment for interactive narratives and multi-agent planning technology.

[5] Author, *simple-SAT*
An education-focused classical planner which reduces planning problems to satisfiability axioms similar to the BlackBox planner.
http://www4.ncsu.edu/~stamant/simple-planners/simple-planners.html

Publicity

16 November, 2016	"UNO's Stephen Ware Recognized as Post-Secondary Teacher of the Year by Louisiana Association of Computer Using Educators," University of New Orleans Campus News, uno.edu. [Link]
26 July, 2016	"Computer Science Professor Wins $157,000 NSF Grant to Study Narrative Intelligence," University of New Orleans Campus News, uno.edu. [Link]
31 May, 2016	"Game On: UNO's Video Game Development Concentration Simulates Real World Experience," University of New Orleans Campus News, uno.edu. [Link]
13 May, 2015	"University of New Orleans to get new digital media lab," by Jed Lipinski, NOLA.com. [Link]

26 February, 2015	Guest on *All Things Considered*, WWNO National Public Radio, New Orleans, LA. Discussed computer science at the University of New Orleans, narrative intelligence, and the future of AI. [Link]
12 February, 2015	Guest on *Think Tank* with Garland Robinette, WWL Radio, New Orleans, LA. Discussed narrative intelligence, the future of AI, and higher education in New Orleans. [Link]
10 February, 2015	"UNO professor gets grant to study artificial intelligence," by Maria Clark, neworleanscitybusiness.com. [Link]
9 February, 2015	"UNO professor wins National Science Foundation grant for artificial intelligence research," by Jed Lipinski, NOLA.com. [Link]