

RUSHIT “RUSH” SANGHRAJKA

Assistant Teaching Professor

Khoury College of Computer Sciences, Northeastern University

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UPDATED IN SEPT 2025

EDUCATION

UNIVERSITY OF UTAH

Salt Lake City, UT

August 2017- December 2023

- PhD in Computing, Human Centered Computing track (GPA: 3.9)
- Advisor: Prof. R Michael Young
- Dissertation title: Generation and Authoring of Belief-based Failed Actions in Narrative Planning

RUTGERS UNIVERSITY

New Brunswick, NJ

January 2015- January 2017

- BS Computer Science, summa cum laude (GPA: 3.9)

TEACHING EXPERIENCE

NORTHEASTERN UNIVERSITY

Boston, MA

Spring 2024- Current

Assistant Teaching Professor @ Khoury College of Computer Sciences

CS2000: Introduction to Program Design and Implementation, Fall 2025

- New foundational course for CS and DS majors using Pyret and Python
- Course enrollment: >200 students over three sections

DS2000: Programming with Data, Spring 2025, Spring 2024

- Introductory Python course focused on data science techniques
- >300 students and >30 TAs each semester (three sections a semester)

DS2500: Intermediate Programming with Data, Fall 2025, Summer 2024

- Intermediate Data Science course focused on statistics, introductory ML and Python libraries for data science
- Course enrollment: ~70 students (Summer) , ~250 students (Fall)

UNIVERSITY OF UTAH

Salt Lake City, UT

Fall 2018- Fall 2023

Student Instructor @ Kahlert School of Computing

Programming for All 1 (COMP1010), Spring 2023, Spring 2022, Fall 2021

- Full teaching responsibility: curriculum, lecture delivery, course management, TA supervision (up to seven TAs)
- Course enrollment ranging from 16 students (Asia Campus) to 161 students (Main Campus)

Guest Instructor @ Kahlert School of Computing

Programming for All 1 (COMP1010), Fall 2021

- Prepared and delivered lectures for a week as part of an initiative to train graduate students to teach large classes

Teaching Assistant @ Kahlert School of Computing

- Natural Language Processing (Fall 2020, Fall 2018): Designed assignments, delivered guest lecture, graded assignments and exams, served as teaching assistant
- Artificial Intelligence for Games (Spring 2019): Delivered guest lectures, graded assessments, served as teaching assistant
- Introduction to Artificial Intelligence (Spring 2019): Designed assignments, delivered guest lectures, graded assignments and exams, served as teaching assistant

RUTGERS UNIVERSITY
New Brunswick, NJ

Fall 2015-Fall 2016

Peer Instructor

Exploring Computer Science (First-year Interest Group Seminars), Fall 2016

- Designed syllabus, course structure, assessments, and lesson plans for a ten-week one-credit course
- 20 students: focused on CS fundamentals and career exploration

Learning Assistant

- Introduction to Computer Science (Fall 2016): Conducted labs for multiple sections of ~30 students each
- Introduction to Discrete Structures (Spring 2016, Fall 2015): Study group leadership and learning activity development working closely with the instructor and the Math and Science Learning Center

RESEARCH EXPERTISE

Current Research: Teaching Critical Engagement with Large Language Models in Data Science Education (2024 - Current)

- Developed a Data Science with Generative AI module and taught it over two semesters to intermediate data science students.
- Presented findings at Khoury College Teaching Workshop and the Illinois Computer Science Teaching Workshop.

Primary Research Areas:

- Narrative Planning and Interactive Digital Storytelling
- Human-Computer Interaction in Creative Computing
- AI-Assisted Authoring Tools and Education Technology
- Computer Science Education and Pedagogical Innovation

PUBLICATIONS

1. **Rushit Sanghrajka**, Daniel Hidalgo, Patrick P. Chen, and Mubbasir Kapadia. 2017. LISA: Lexically Intelligent Story Assistant. *Proceedings of the 13th AAAI Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE 2017)*.

2. **Rushit Sanghrajka**, Wojciech Witoń, Sasha Schriber, Markus Gross and Mubbasir Kapadia. 2018. Computer-assisted Authoring for Natural Language Story Scripts. *The Thirtieth Annual Conference on Innovative Applications of Artificial Intelligence (IAAI 2018)*.

3. Marcel Marti, Jodok Vieli, Wojciech Witoń, **Rushit Sanghrajka**, Daniel Inversini, Diana Wotruba, Isabel Simo, Sasha Schriber, Mubbasir Kapadia, and Markus Gross. 2018. CARDINAL: Computer Assisted Authoring of Movie Scripts. *ACM Conference on Intelligent User Interfaces (IUI 2018)*.

4. **Rushit Sanghrajka**. 2018. Leveraging Cognitive Models in Planning to Assist Narrative Authoring. *14th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE 2018)*. Doctoral Consortium Abstract.
5. **Rushit Sanghrajka**. 2019. Interactive Narrative Authoring Using Cognitive Models in Narrative Planning. *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE 2019)*. Doctoral Consortium Abstract.
6. **Rushit Sanghrajka** and R. Michael Young. 2019. A Knowledge Representation for Planning-Based Story Generation Applied to the Manual and Automatic Encoding of Plot. *International Conference on Interactive Digital Storytelling (ICIDS 2019)*.
7. **Rushit Sanghrajka**, R. Michael Young, Brian Salisbury and Eric W. Lang. 2019. ShowRunner: A Tool for Storyline Execution/Visualization in 3D Game Environments. *International Conference on Interactive Digital Storytelling (ICIDS 2019)*.
8. Benjamin Nye, **Rushit Sanghrajka**, Vinit Bodhwani, Martin Acob, Daniel Budziwojski, Kayla Carr, Larry Kirshner, and William Swartout. 2021. OpenTutor: Designing a Rapid-Authored Tutor That Learns As You Grade. *The International FLAIRS Conference Proceedings* 34.
9. **Rushit Sanghrajka**, Eric W. Lang, R. Michael Young. 2021. Generating QUEST Representations for Narrative Plans Consisting of Failed Actions. *UX of AI Workshop held at the International Conference on the Foundations of Digital Games (FDG'21)*.
10. **Rushit Sanghrajka**, R. Michael Young, and Brandon Thorne. 2022. HeadSpace: Incorporating Action Failure and Character Beliefs into Narrative Planning. *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE 2022)*.
11. **Rushit Sanghrajka**, and R. Michael Young. 2022. Evaluating Reader Comprehension of Plan-Based Stories Containing Failed Actions. *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE 2022)*.
12. Michael Clemens, Nancy N. Blackburn, **Rushit Sanghrajka**, Monthir Ali, M. Gardone, Shilpa Thomas, Hunter Finney, and Rogelio E. Cardona-Rivera. 2022. A Case-Based Reasoning Approach to Plugin Parameter Selection in Vocal Audio Production. *Case-Based Reasoning Research and Development: 30th International Conference, ICCBR 2022*.

PATENT

1. Sasha Anna Schriber, **Rushit Sanghrajka**, Wojciech Witon, Isabel Simo, Mubbasir Kapadia, Markus Gross, Daniel Inversini, Max Grosse, and Eleftheria Tspidi. Automated storyboarding based on natural language processing and 2D/3D pre-visualization. U.S. Patent 11,269,941, issued March 8, 2022.

AWARDS AND RECOGNITION

EAAI NEW AND FUTURE AI EDUCATOR AWARD

The Eighth Symposium on Educational Advances in Artificial Intelligence 2018 (EAAI-18)

February 2018

NSF GRADUATE RESEARCH FELLOWSHIP PROGRAM (GRFP) Honorable Mention	2017-18
RODKIN SCHOLARSHIP School of Arts and Sciences Academic Excellence Award, Rutgers University	2015-16

ACADEMIC SERVICE

University Committees

- TA Committee, Khoury College of Computer Sciences 2024-Current
- **Chair:** Faculty Development Committee, Northeastern University 2025-Current
- **Co-Chair:** Graduate Student Activities Council, University of Utah 2018-2020

Conference Leadership

- **Program Committee Member:** AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2020 to 2025
- **Program Committee Member:** IEEE Conference on Games (CoG) 2022-2024
- **Communications Chair:** AIIDE 2021
- **Program Committee Member:** International Conference for Interactive Digital Storytelling (ICIDS) 2021 to 2024
- **Co-Chair:** Intelligent Narrative Technologies Workshop (INT) 2020
- **Program Committee Member:** Intelligent Narrative Technologies Workshop (INT) 2020
- **Communications Chair:** ICIDS 2019

INDUSTRY EXPERIENCE

RESEARCH ASSOCIATE Kasisto, Inc <ul style="list-style-type: none"> • Conversational system for banking assistance 	Summer 2022
RESEARCH ASSOCIATE Institute for Creative Technology, USC <ul style="list-style-type: none"> • OpenTutor project: a conversation-based tutoring system 	Summer 2020
RESEARCH INTERN SRI International <ul style="list-style-type: none"> • DARPA-funded “Communicating With Computers” project 	Summer 2019
LAB ASSOCIATE Disney Research <ul style="list-style-type: none"> • CARDINAL: Computer-assisted movie script authoring 	Summer 2017

COMMUNITY ENGAGEMENT

THE POSSIBLE ZONE Boston, MA <ul style="list-style-type: none"> • Career talks and project judging for high school students from Boston Public Schools 	Summer 2025
KHOURY COLLEGE OF COMPUTER SCIENCES	Spring 2024, Fall 2024, Spring 2025

- CS engagement and outreach programs for Boston Public Schools students

SPARSHA CHARITABLE TRUST

June 2013- October 2014

- Mathematics and Science instruction for economically disadvantaged children