

Nic Junius

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WORK EXPERIENCE

Expressive AI Engineer; UC Santa Cruz (January 2022 - present)

The Mimic social navigation simulator is a robot and crowd simulation tool built in Unity using C#.

Responsibilities:

- Developed simulated character behavior.
- Implemented feature requests for AI systems.
- Built authoring pipelines and frameworks for character behavior and personalities.
- Tested, debugged, and profiled AI code.

Expressive AI Architect; UC Santa Cruz (September 2018 - present)

Puppitor is a game interface and character simulation library. Python and C# versions available.

Responsibilities:

- Developed theatrical model of character acting.
- Designed system architecture to implement the character acting model.
- Implemented system design in code and refined the library based on game design needs.
- Created an embedded domain specific language to define character actions and expressions.
- Developed debugging and testing tools to aid in authoring characters with the system.

Project Lead, Narrative Designer, Engineer; UC Santa Cruz (September 2018 - present)

Tracks in Snow is an interactive drama visual novel developed using Python, Ren'Py, and Puppitor.

Responsibilities:

- Led the design of a novel interactive narrative experience rooted in character acting.
- Created feedback systems for human and AI controlled characters to support gameplay goals.
- Coordinated with artists and composers to create in game assets supporting the AI systems.
- Sole writer of the game's storyline and dialogue scripts.
- Built and maintained pipelines for rapidly adding narrative content to the rest of the game.

Lead Writer; UC Santa Cruz (October 2017 - September 2020)

Academical is a choice-based interactive fiction training game for graduate students built in Twine.

Responsibilities:

- Developed style guidelines for other writers.
- Gave direction and feedback to drafts.
- Outlined narrative structure for scenarios.
- Edited for voice and consistency across scenarios.

Doctoral Researcher; UC Santa Cruz (September 2017 - present)

Independently pursue research on expressive AI systems and narrative design.

Responsibilities:

- Published papers discussing AI system design and architecture.
- Published award winning papers discussing and critiquing narrative design.
- Advised on research-based interactive fiction projects.
- Advised on student game projects.

EDUCATION

PhD Computational Media | University of California, Santa Cruz (2021 - present)

MFA Digital Arts and New Media | University of California, Santa Cruz (2019 - 2021)

MS Computational Media | University of California, Santa Cruz (2017 - 2019)

BS Computer Science: Game Design | University of California, Santa Cruz (2012 - 2016)

PERSONAL INFORMATION

During my time as a doctoral researcher I have managed and been a team member on multiple research projects, both large and small scale. I directed and managed a team of four writers and was responsible for the completion of seven individual episodes, all delivered on time within the span of three months. I have led multiple game projects with varying numbers of collaborators and am used to providing direction and offering flexibility in how tasks are completed while maintaining a coherent high level vision of each project. My most recent job as an AI engineer has been a collaboration with the Honda Research Institute and Northwestern University, requiring a large amount of coordination across teams and different engineering disciplines as well as independence to pursue developing new features and capabilities for software deliverables.

Beyond my time as a system designer and engineer, I am an avid theatergoer who has also worked on four theater productions, two as a playwright and two as a lighting designer. My time as a playwright in particular has made me take joy in the creativity that comes with collaboration and seeing what colleagues with expertise different from my own will add to my work.