

Brandon R. Thorne

“...in my impatience I have fallen into folly. Yet the making of things is in
my heart from my own making by thee”

-Aulë to Ilúvatar on the making of the dwarves[†]

Education

- (expected) **Ph.D. Computer Science**, *North Carolina State University*, Raleigh.
2014–2020
- (expected) **MCS**, *North Carolina State University*, Raleigh.
2014–2018 Incorporating mistaken actions in multi-agent, intentional planning.
- 2003–2008 **B.S. Computer Engineering**, *University of Arkansas*, Fayetteville.
Distributed LIDAR data to rasterized image processing workflow with Condor and ArcGIS.

Experience

- 2017–Present **Teaching Assistant**, *North Carolina State University*, Raleigh.
Provided feedback and guidance for student software design and implementation. Instructed lab sections.
- Software Engineering
 - Game Engine Foundations
- 2014–2016 **Graduate Research Assistant**, *Liquid Narrative Group, NC State*, Raleigh.
Facilitated user agency and presence in research software applications by leveraging narrative generation and computational models of human perception, belief, and intention.
- Designed and implemented a declaratively-driven cinematic sequencer system in Unity
 - Integrated user interaction devices into research demonstration prototypes in Unity including Kinect 2 (gesture and speech), Oculus Rift, Sixense Hydra
 - Interviewed developer job candidates
- 2011–2014 **Programmer & Programmer Analyst**, *WalMart Stores Inc.*, Bentonville, AR.
Designed, implemented, maintained, and supported warehouse management software serving a heterogeneous mix of business processes on four continents.
- Performed code reviews for functionality and adherence to internal style guidelines in C, C#, and JAVA.
 - Provided on-site support for e-commerce distribution center pilot sites.
 - Mentored interns, providing support for administrative, technology, and product related issues.

[†] *The Silmarillion* by J. R. R. Tolkien

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Projects

- 2017 **ProcDefense.**
Arcade-style game for comparative analysis of player training strategies.
- 2014–2016 **Bardic.**
Multimedia DotA replay summarization suite generating text, maps, and cinematics to describe gameplay.
- 2015–2016 **FireBolt.**
Scriptable cinematic sequencer implementing a custom camera scripting language.
- 2016 **Project Aulë.**
GUI tool for applying tile textures to generated dungeon layouts.
- 2015 **Bossy: a System for Abstract Agent Control.**
Behavior tree based ARPG boss control system using desired health and resource curves as authorial input. Integrated for boss encounters in Skyrim.

Technologies

- Basic C++, bash, Perl, L^AT_EX, ansProlog, SQL, XUnit, HTML5, javascript
Intermediate C#, JAVA, C, Unity, git, SVN

Communication Skills

- 2017 Paper presentation at Interactive Narrative Technologies Workshop of the AI in Interactive Digital Entertainment Conference
Generating Stories that Include Failed Actions by Modeling False Character Beliefs
- 2017 Demo presentation at Experimental AI in Games Workshop of the AI in Interactive Digital Entertainment Conference
ProcDefense – A Game Framework for Procedural Player Skill Training
- 2016 Poster at Laboratory for Analytic Sciences Research Symposium
Modeling mistaken behaviors in intentional planning
- 2016 Poster at Data 4 Decisions
FireBolt: the final stage of cinematic realization
- 2014 Poster at Laboratory for Analytic Sciences Narrative Processing Workshop
Toward increased comprehension with natural user interfaces

Recently Played

- Divinity: Original Sin II
- Heroes of the Storm
- Dungeons and Dragons
- Mysterium

Interests

- Cooperative Gaming
- Storytelling
- Hiking
- Meaningful Names