Brandon R Thorne

1009 Olive Drive
Garner, NC 27529
☎ (479) 200 0960
✉ brandonthorne at gmail.com
⌨ brandon.plutoniumdinosaur.com

Projects

2017 **ProcDefense**, Arcade-styled game utilizing dynamic difficulty adjustment to improve the rate of player skill acquisition.

2014–2016 **Bardic**, Multimedia game replay and summarization suite generating text, maps, and cinematics for logs of DotA2 games.

2015–2016 **FireBolt**, Scriptable cinematic sequencer using outputs from automated story and discourse planners to construct cinematics. Uses a proprietary camera language to define idioms and a dynamic asset binding framework to associate models and animations to logical actors.

2016 **Project Aulë**, GUI tool for applying tile textures to 2D dungeon layouts.

2015 **Bossy: a System for Abstract Agent Control**, Behavior tree-based ARPG boss control system driven by designer authored desired boss and player health curves over a fight's duration. Game agnostic tree structure interacts with game-specific ability implementation in Skyrim.

Technologies

C#, Unity, git, JAVA, C, C++, bash, ansProlog, svn, SQL, XUnit, HTML5, js

Experience

2017–Present **Teaching Assistant**, *North Carolina State University*, Raleigh.
Courses: Software Engineering, Software Testing, 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.
○ Integrated user interaction devices into research demonstration prototypes in Unity including Kinect 2 (gesture and speech), Oculus Rift, Sixense Hydra

2011–2014 **Programmer & Programmer Analyst**, *WalMart Stores Inc.*, Bentonville, AR.
Designed, implemented, maintained, and supported warehouse management software serving a heterogenous mix of business processes on four continents.
○ Performed code reviews for contractor-submitted code in C, C#, and JAVA.
○ Provided on-site support for e-commerce distribution center pilot sites.

Education

(exp)2020 **PhD Computer Science**, *North Carolina State University*, Raleigh.

2018 **MCS**, *North Carolina State University*, Raleigh.
Incorporating mistaken actions in multi-agent, intentional planning.

2008 **BS Computer Engineering**, *University of Arkansas*, Fayetteville.
Distributed LIDAR data to rasterized image processing workflow with Condor and ArcGIS.

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