

## Overview

As a hybrid coder / game designer, my role is more often defined by the needs of my project rather than a traditional discipline; promoting stronger communication, collaboration and improved team dynamics. While coding, I can manage design ownership and take initiative. When designing, I anticipate technical considerations while reducing iteration overheads with hands-on prototyping and refinement.

I'm most compelled by the areas of game creation that involve motion and interaction; such as controls, physics, animation, user experience (UX) and user interfaces (UI). In my previous employments I have had technical ownership of the player character for Little Nightmares and worked extensively with tools and interaction design for user-generated content (UGC) in the LittleBigPlanet franchise.

## Professional Experience

### Independent Game Developer

**Bad North**  
Apr 2017 - present

#### Overview

A wide range of responsibilities for the development of Bad North, including programming, game design, production and business development.

### Tarsier Studios AB

Feb 2011 - March 2017

### Senior Programmer / Technical Game Designer

#### Overview

Multidisciplinary role focussing on player controls and UX from high-level design down to implementation of character controllers, animation systems, gameplay tools and interfaces.

#### Typical Responsibilities

- Gameplay coding; in particular player controls and interactable gameplay objects.
- Technical animation: blending, inverse kinematics and bespoke animation systems.
- Game design; including player controls, tutorials and social/community features.
- Tools design, especially with consideration for UGC tools provided to end users.
- UX and UI design and implementation.

**Little Nightmares**  
Sep 2014 - March 2017

### Gameplay Code / Technical Animation in Unreal Engine 4

- Technical and design ownership of the game's playable character (Six).
- Implementation of controls, core mechanics and content creation tools.
- Technical animation for Six, ensuring high quality of characterisation and game feel.
- Additional gameplay coding in C++ and Unreal Engine 4 Blueprints (visual scripting).

**LittleBigPlanet 3**  
Feb 2014 - Sep 2014

### Technical Design / Gameplay Code

- Tools design for new UGC features and UI for the LittleBigPlanet level editor.
- Design and code implementation of player controls for the "Dash Boots" powerup.
- Development of interaction model for Touch Pad on PlayStation4 / DualShock4.

**LittleBigPlanet 2 DLC**  
Jan 2013 - Oct 2013

### Gameplay Code

- Implementation of new progression system and front-end UI for the DC Comics DLC.
- Coding new gameplay features, UGC tools and UI.

**LittleBigPlanet PS Vita**  
Feb 2011 - Aug 2012

### Interaction Design

- Defined new interaction model for PlayStation Vita's touch-centric hardware.
- Completely overhauled level editor UX and UI for Playstation Vita.
- UI redesign for extensive community and UGC features to support touch interaction.
- Technical Lead for internal code team and liaison to partners at Double Eleven Ltd.

## Professional Experience (cont.)

### Freelance Level Designer

**SCEE Marketing**  
Nov 2010 – Feb 2011

#### Production of Marketing Materials for LittleBigPlanet 2

- Level / minigame design for a UK television advertising campaign for LittleBigPlanet 2.
- Scenery / set design for the music video "Took It All Away", by R'n'B group N-Dubz.

### General Electric Software Engineer

**Aug 2008 - Feb 2011**

#### Overview

Hardware driver development for real-time embedded military / aerospace applications.

#### Typical Responsibilities

- Development in C for Intel / PowerPC platforms running VxWorks Operating System.
- Multiprocessor architectures and thread safety for symmetric multiprocessing.
- API design for device drivers and hardware abstraction.
- Workflow / process development, to support the needs of an international team.
- Automation of test infrastructure.

### Utile Engineering Software Developer

**Aug 2003 - Sep 2004**

#### Typical Responsibilities

- Development of database-driven internal company software.
- System testing and feasibility research for automated testing solutions.
- Website design and maintenance.

## Educational History

### University of Birmingham M.Eng Electronic and Computer Engineering - Grade: 1 (Hons)

**Oct 2004 – Jun 2008**

#### Key Taught Courses

- C, C++, assembly.
- Human factors, Human-Computer Interaction.
- Artificial Intelligence, Data Mining, Pattern Matching.
- Computer Networking, Communications Systems.
- Analogue / Digital Circuit Design, Hardware Description Languages.
- Project Management.

#### M.Eng Research Project

Jun 2007 – May 2008

#### Robot Arm Interaction with Dynamic Environments

- Individual M.Eng research project; awarded 1st class grade.
- C++ implementation of generic multithreaded AI framework.
- Application-specific extension of system to play a basic table tennis game.
- Vision system with real-time decision-making and kinematic control of robot arm.

#### 3<sup>rd</sup> Year Group Project

Oct 2006 – May 2007

#### Secure Software-Defined Radio

- Team lead in multidisciplinary group of 9: organisation, scheduling and budgeting.
- Software implementation of UI, networking protocols and encryption.

### Wrenn School A Level (UK General Certificate of Education)

**Sep 2001 – Jul 2003**

Computing (A), Physics (A), Mathematics (A), Further Mathematics (B).