

Rebecca (Beca) Vessal (She/Her)

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INTRO

Hey there! =D My name is Beca. I'm a senior gameplay engineer with 10+ years of gameplay experience with a game AI specialization. Throughout my career, I've gone deep learning new topics/tech to solve a variety of ambiguous problems, which I absolutely love. I also love to share my knowledge with others and to empower folks to help them accomplish their goals.

SKILLS

Programming Languages

> Proficient in: C++, Blueprint, Objective-C, C#
> Familiar with: Lua, Python

IDEs

> Visual Studio Professional, Xcode

Game Engines

> Unreal (7+ years), Unity (2+ years)

Version Control Systems

> Perforce with P4V, Git with Bitbucket and GitHub

EMPLOYMENT

Senior Gameplay Programmer at Double Fine Productions

July 2018 - Current

Senior Gameplay Programmer on NDA

- **Programming Languages: C++ with Blueprint**
- **Game Engine: UE5**

> Lead, plan, architect, and create core and content feature systems for bots
> Mentor and managed up to 4 engineers on the bots team including contractors, interns, and full-time engineers with weekly 1:1s and code reviews
> Developed and prototyped various character abilities, character customization, communication ping, tutorial systems, map specific features, and audio workflows
> Created nav mesh generation commandlet to generate nav mesh on nightly builds
> Interview engineers for other teams as part of the final rounds engineer group
> Co-spearhead the Double Fine internship program and established both a generic and programming specific intern guide and processes with based on my own internship experiences and feedback from previous Double Fine intern mentors and managers

Gameplay Programmer on Psychonauts 2

- **Programming Languages: C++ with Blueprint**
- **Game Engine: UE4**

> Created and rapidly prototyped custom level specific systems with cross disciplinary collaboration for brain levels
> Developed AI systems such as animal AI, NPC, and boss systems
> Led and developed core systems for boss fights and owned engineering for a very small cross discipline team to rapidly prototype and ship 3 boss fights from concept to shipping quality within a year

Game Engineer at PlayFirst/Glu Mobile Inc.

Oct. 2015 - July 2018

Gameplay Programmer on Diner Dash Adventures

- **Programming Language: C#**
- **Game Engine: Unity**

> Created restaurant and hotel mechanics using Entitas, which is an open source ECS framework for C# in Unity
> Integrated reusable cells for scroll feed UI
> Worked on the avatar system with cross disciplinary collaboration
> Prototyped restaurant mechanics and UI in pre-production

Gameplay Programmer on Cooking Dash & Gordon Ramsay Dash

- **Programming Languages: C++, Lua, Objective-C, Ruby, Python, and AS3**
- **Game Engine: Cocos2d-x**

> Created new themed restaurants using a component based system to quickly iterate, prototype, and ship new gameplay features in a cross discipline collaboration fashion
> Prototyped new game ideas for proof of concept
> Made significant improvements to tools used by developers, artists, and designers to streamline their work process and to optimize our games
> Mentored new developers and led new content creation for Cooking Dash

AWARDS

IGDA Foundation

> IGDA Foundation Next Gen Leaders Recipient

Game Developer Conference (GDC)

> My GDC talk on how we crafted and prototyped epic boss fights in Psychonauts 2 was featured by Game Developer as one of the best programming GDC talks of 2023:

<https://tinyurl.com/P2BossFightGDCTalk>

PUBLICATIONS

Game AI Uncovered

Crafting Epic Boss Fights in Psychonauts 2 (Volume 4 - Spring 2026)

> Covers the modular data driven core tech we used to empower our small core multidisciplinary team to rapidly prototype fun epic boss fights in Psychonauts 2

> Gives some production and design tips for boss fights

Bringing Ambient Animals to Life in Psychonauts 2 (Volume 5 - Summer 2026)

> Discusses the AI and gameplay tech used to make the animals' wander behavior and responsive behaviors towards the player and environmental objects in Psychonauts 2

EDUCATION

Rochester Institute of Technology (RIT)

BS: Video Game Design & Development (2010 - 2014)

Minor: Psychology

> Cumulative GPA: 3.81 Major GPA: 3.81