

# ANANTHA NATARAJAN

(979) 739 7912  
anathanatarajan@tamu.edu

github.com/anantha-natarajan  
linkedin.com/in/anantha-natarajan  
anantha-natarajan.github.io/portfolio

## EDUCATION

### Texas A&M University, College Station, Texas

Master of Science, Visualization - Computer Graphics

GPA: 3.65 / 4.0

Spring 2021

*Related Coursework:* 3D Modelling & Animation, Image Synthesis, Digital Image Processing, Physically-Based Modeling & Animation, Design Communication, Life Drawing, Time-Based Media

### Anna University, Chennai, India

Bachelor of Technology in Information Technology

GPA: 3.0 / 4.0

April 2016

*Related Coursework:* Data Structures and Algorithms, Object Oriented Programming, Object Oriented Analysis and Design, Operating Systems, Database Management Systems

## PROJECTS

### Rare Necessities— Technical Artist [Unreal Engine, Houdini]

- As a part of 4-member team, created a first-person open world game emphasizing the importance of social distancing for COVID-19 Game Jam organized by Texas A&M LIVE Lab.
- Built a **procedural building generator** which takes a closed curve as an input and generates the building composed of panels (walls, windows, doors) with options to adjust the floor height, building height and other panel properties.
- Built a **procedural road building tool** that takes curve as input and generates roads, pavements with options to modify road properties. The tools **procedurally unwrap UV's** and this simplified creation of a diverse city with unique buildings and roads.

### Art Directable Scatter Placement Tool [Houdini]

- Developed a system that help artists create a gray boxed/detailed **3D environment** from a simple **2D layout sketch**
- Artist will have complete control over the **randomized asset placement, asset density and distribution**. Several layers of different environmental areas encompassing different assets can be layered over one another.

### Harvest — Game Developer and Technical Artist [Unreal Engine]

- Created a first-person open world farm exploration game guided by mentors from Epic Games, Amazon Games and the game was released in itch.io (<https://averagejo.itch.io/harvest>)
- Developed a **physics-based character-foliage interaction system** that supports instancing different foliage models and ability to handle around **200K foliage**.
- Implemented core gameplay mechanics, AI enemy spawning, in-game UI, game save and re-spawn system using Unreal Engine and rigged foliage models in Maya.

### Physics Based - Particle Generator [OpenGL, C++, Houdini]

- Architected a particle generator that generates **tens of thousands** of particles each deriving its attribute from a random distribution with an option to export the simulation as an obj file.
- Used **Stack data structure** to efficiently store/discard particles thereby reusing memory locations of dead particles.
- Wrote a custom **Python Surface Operator** (SOP) in Houdini that reads the simulation from the obj file and visualize the simulation using Mantra Renderer.

## EXPERIENCE

### Report Bee Pvt Ltd, Chennai, TN— Visual Designer

May 2017 - June 2018

Created vector graphics & illustration, User Interfaces and Interactions for web applications. Designed several seasonal interactive animations that appeared on Report Bee's landing page.

### Jaze Networks Pvt Ltd, Chennai, TN— Full Stack Developer

May 2016 - May 2017

Completely revamped the franchise module of a Network Management SaaS solution. Worked with payment and SMS gateway providers to integrate their solutions with the product.

## SKILLS

**Design Tools:** Houdini, Unreal, Maya, Unity, Adobe Creative Suite

**Technical Skills:** C, C++, Python, PyMel, OpenGL, PHP, HTML, CSS, JS, jQuery, WebGL, ASP.NET, MySQL