Francesco DiPietro

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EXPERIENCE

Gameplay and Design Engineer
June 2020 - Present
C77 Entertainment

Developing systems to facilitate designer workflows and gameplay features.
Responsibilities

- Development of game systems for a networked environment
  - Worked with directors to design game systems to create interesting player experiences
  - Implemented rapid prototypes in collaboration with designers to facilitate broad exploration
  - Directed cross-discipline discussions to collect feedback for iteration

- Development of several rules engine systems for gameplay-related content creation
  - Introduced a system to enable game designers to codify player activity with total ownership over development, feedback, and iteration
  - Worked with monetization designers and backend engineers to build a system to organize reward distribution while maximizing ease of authorship

- Development of procedural animation systems
  - Planned and developed animation systems closely with artist teams
  - Developed authoring tools to facilitate artist usage

- Led a major architecture refactor from pre-UE5 standards to a custom UE5-style solution
  - Identified limitations in prior approach and introduced an expandable improved architecture
  - Designed, presented, and scoped an implementation which maintained backwards compatibility during transitionary development
  - Worked closely with other feature owners to ensure coordination around conflicting work
  - Mentored contracted engineers to take over owned feature support and ensured sustained development

Senior Ray Tracing QA Analyst
Feb 2020 - June 2020
(4 months)
Epic Games

QA analyst for the ray tracing team on Unreal Engine.
Responsibilities

- Singular ownership over all ray-tracing related coverage and direction of test execution
- Identified deficiencies in CI system for ray tracing support
  - Self-learned Unreal's automated-testing framework to provide improved coverage
  - Self-learned Unreal's Buildgraph to produce CI jobs for ray tracing testing

- Worked closely with engineers to ensure feature health and meet partner milestones
  - Led information gathering on feature functionality
  - Built feature relationship maps to identify potentially threatened adjacent features

- Assisted production for product demo projects including the 'Troll' demo and ArchViz sample
  - Established and executed testing to ensure film-level quality
  - Prepared project demonstrations for lookdev with directors

Rendering QA Analyst
Aug 2018 - Feb 2020
(1 years 6 months)
Epic Games

QA analyst for the graphics programming team on Unreal Engine.
Responsibilities

- Performed technical defect investigations
  - Deep-dives into callstacks to identify potential culprits
  - Executed profile captures across all platforms: Win,Mac,Linux, PS5,XBOX,Switch, Android,iOS
  - Analyzed profile captures to find and report on non-performant code

- Covered 2-3 engine releases per year, including hotfixes
  - Owned testing for multiple features side-by-side across 5 teams and 35 developers over entire lifecycle from start to ship
  - Worked with product owners, developers, and QA management to define acceptance criteria, identify risks, and plan testing coverage for each feature/release
  - Assisted documentation teams in describing feature workflows and publicizing known defects

- Developed and executed procedures for performance captures and subsequent analysis for Fortnite Battle Royale
  - Provided statistics and breakdowns for a quarter's worth of releases at a weekly release cadence
  - Performance captures gathered on all supported consoles (PS5, XboxOne, Switch, Android, iPhone, and Desktop)

Software Tester

Software tester for the Unreal Engine.

Responsibilities

July 2017 - Aug 2018
(1 years 1 months)
Epic Games

- Performed functional and subjective testing on the Unreal Engine
- Researched and log detailed bugs to provide concise debugging information
- Tested and verified fixes for logged defects
- Trained newly hired team members
- Built for and launched to all desktop, mobile, and console platforms
- SME on test execution procedures for all testing on Linux desktop platform
- Coverage over 4 engine releases

Innovation and Technology Co-op

Mobile application prototyping within a think-tank environment.

Responsibilities

July 2016 - Sep 2016
(3 months)
MITRE

- Developed prototype REST API backend to facilitate communication with project's mobile prototypes
- Researching and presenting analysis on existing similar mobile development services for comparison to team's given project
- Evaluation and demonstration of mobile app development tools

Bachelor's Degree in Game Development and Design

Focuses in gameplay and graphics programming.

May 2016
Rochester Institute of Technology

SKILLS

Creation Software
Professional: Unreal Engine, Godot
Personal: FMOD, Blender, Figma, Fusion360, Reaper, WWise, Adobe Photoshop, GIMP, Inkscape, Unity3D

Languages
Professional: C++, Javascript, C#
Personal: Python, Bash, Java, HTML, CSS

Libraries & Frameworks
Playfab, BuildGraph, Node.js, Express, React, NodeCG, Android SDK, OpenGL, DirectX

Project Software
Azure DevOps, Asana, JIRA, Zephyr, Testrail, Perforce, Git