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Summary

I'm a Game Developer and Designer with 3 years of experience in Unity and have created 30+ prototypes, games, and simulations. I've also been working in the field of Gamification, AR, and VR since early 2017. My gamification and design techniques are highly inspired by Jesse Schell, Jane McGonigal, and Chris Crowell. Currently, I'm independently working on creating "History-based AR game on Harappan Civilization", "A game to teach the art of composition and manual photography" and "Games for helping Stroke patients in rehab".

Education

2016 - present	IIT Gandhinagar, India	B.Tech (Comp. Science and Engineering)

Internships

- ***PICT; Prof. David Parkinson (University of Saskatchewan); July '18 - Present***
    - PICT is an initiative led by faculty at the University of Saskatchewan working together with colleagues at international partner institutions. It offers established and emerging faculty worldwide the opportunity to teach collaboratively.
    - As a Webmaster, developed an LMS website with an in-house conference system, as well as a social network system for PICT.
- ***WhatBox Ent. Pvt. Ltd; 24th May '18 - June '18***
    - As a UI Programmer, implemented the proposed design while updating it to decrease the overall build size, improving performance and making it more engaging.
    - As a Game Programmer, instead of using an Asset from the asset store, implemented it from scratch which resulted in a significant increase in performance as well as a decrease in the build size.
    - Developed a Quiz game in Unity which consists of different types of Questions, which are generated by the server in real-time.
    - Also created a Reusable and Scalable word finding mechanism for the Grid, which can be exported as an independent and easy to use Unity Package.
    - Helped fellow intern to create a reusable UI System for the game.

Game Development, Design, and Gamification Projects

- ***PlayPro Digis; September '17***
    - Designed, Developed and published a top-down shooter on Play Store.
    - Successfully integrated Google play services like login, leaderboard, achievements.
    - Used Object pooling and profiling for optimizing the game for low-end smartphones.
- ***IP-Ninja; March'18***
    - Developed a 2D Platformer style Educational game for spreading awareness about "Intellectual Property".
    - Used Curiosity-driven gameplay to make it more engaging.
    - Created a "Character class" and referenced the Player and Enemies to the character class(instead of Monobehaviour) for keeping the code clean.
- ***HyperPoetry Level 1: March '18 - April '18***

- ○ This project is an initial attempt to bridge the philosophical thought of 'Continuum Theory & Hausdorff Space' along with the concept of Hypertext through the use of poems that have the subject matter of 'infinity' as its core.
  - ○ Launched at the Digital Humanities Alliance of India(DHAI) conference 2018.
- ***Using Gamification to Solve Traffic Problems; December '17***
  - ○ The project was made for the Workshop on Design and Cognitive Intervention for Large-Scale Social Concerns which was jointly organized by IITGN (IIT Gandhinagar) and JAIST (Japan Advanced Institute of Science and Technology).
  - ○ Proposed a low-tech and easy to implement Traffic lights system to prevent drivers from crossing the Stop line.
- ***EducationAR; July '17 - October '17;***
  - ○ Designed and developed a Gamification based app (with curiosity at its core) using Unity for school children to help them understand subjects like History and Maths better by using AR and other Game mechanics like Points, Leaderboards and Multiplayer Quizzes.
- ***Making games for the Curiosity Lab at IITGN; Prof. Jaison Manjaly; December '17 - April '18***
  - ○ Developed and Designed Curiosity based games on Unity for children to enhance their learning ability and collected the data for future analysis.
- ***Simulation made in Unity for Modelling of Real gas using a Pendulum in a Capacitor; November '17***
  - ○ Simulated a Pendulum between two charged capacitor plates in Unity.
  - ○ The results obtained from the simulation were similar to the values found after doing the real-world experimental.
- ***Games, Gamers and Gamification; Prof. Pedro Pombo; July '17 - November '17***
  - ○ The main aim of this project was to learn about Gamification, different ways to implement it efficiently and finding various opportunities for implementing it in India.
- ***Gamification of Cognitive Science Experiments; December '17 - April '18***
  - ○ Transformed mundane Cognitive Science experiments into more engaging games.

Other Projects

- ***Creating 3D face models with different expressions using a single 2D image as Input: Prof. Krishna Prasad; August '18 - November '18***
  - ○ The project included bridging existing neural networks to create a black box, which will take a single frontal facial image as an input and will give 3D face models with different expressions as outputs
- ***Convolution using Systolic Arrays: September '18 - November '18***
  - ○ Implemented a Matrix Multiplier using Systolic arrays on Basys 3 FPGA board.
  - ○ Then using the Matrix Multiplication model for carrying out Convolution on a stored image and displaying the convoluted image on a display using VGA.

Skills

- ***Game Engines:*** Unity3D, Construct 2 / 3, Unreal Engine
- ***Platforms:*** Android, PC, WebGL, Google Cardboard, Vuforia.
- ***Character and Environment Development:*** Blender, WorldViz Vizard 5, Make Human, Google SketchUp
- ***Digital Design Softwares:*** Inkscape, Adobe Photoshop, Adobe Illustrator
- ***Programming Languages:*** C#, Python, Matlab, Verilog, Lua, C++, HTML, CSS, JavaScript, PHP, ARM Assembly language

Relevant Courses
- *Nature inspired Computing;* The course focuses on adaptive learning systems (Neural Networks, Fuzzy Logic, and Genetic Algo.), with emphasis on nature-inspired learning methodology.
- *Fundamental Neuroscience*
- *Interface Design*

Achievements
- *Technical:*
  - 1st Position in Child's Play, Game development competition held by DiGiS (formerly DICE), game development club of IITGN; April'17
  - 2nd position in AR Game development competition held by DiGiS; March '18
- *Cultural*:
  - 1st position in Online Photo Story in 2nd Inter-IIT Cultural Meet; December '17
  - 3rd position in 48 hours Short Filmmaking Competition in 1st Inter-IIT Cultural meet; Dec. '16

Positions of Responsibility
- *Secretary, 16Pixels IITGN, Photography club of IITGN; May '17 - April '18*
- *Event Organiser, DRA, Amalthea '17 (Technical summit of IITGN):*
  - Strategically minimized the expenses in Amalthea by finding new and innovative methods of creating a Drone racing track, which led to the saving of Rs.15000

Extra-Curricular Activities
- Developed over 30 different games for PC, Android, and Cardboard in last year.
- Conducted different workshops on Game Development with Unity for DiGiS and IITGN student community and played a major role in spreading the Game Development culture in IITGN.
- Worked as a teacher at "Chetana" by NYASA, which focuses on teaching underprivileged children for free.
- Presented in the IITGN-JAIST joint workshop on Design Interventions for Large-Scale Social Concerns.
- Was part of India Ki Khoj, a social interaction program for students of IITGN, CalTech and JAIST.
- Senior mentor of "DiGiS" (Game dev club of IITGN), member of "Health Club" (2016-17), Designer for BYTES (in-house magazine of IITGN), member of "Alumni Association" (2016-17)
- Event Organiser for Ignite 3.0 (Tech-fest of IITGN), Blithchron'17 (Cult-fest of IITGN), BlithMun (MUN by IITGN) and International Conference on Safety 2016

Showcase reel showing the projects made by me
- https://youtu.be/ess4__OG-_0

Github Repo
- https://github.com/Kshitij08

Portfolio Link
- https://kshitij08.github.io/portfolio/