

<div><div></div><div>www.github.com/amutbkt</div></div>		<div>Amit Kumar Mehar</div>	<div>+91-9116488276</div> <div>amit.k.mehar@gmail.com</div>
<div>Education</div> <div>Indian Institute of Technology, Roorkee</div> <div><ul style="list-style-type: none">Major: Electrical Engineering, B-TechProgramming Coursework: Data StructuresEE Coursework: Graph Theory, Control and DynamicsProjects: Flappy Bird Automation using Reinforcement Learning to play automatically using servo motor</div>			<div>2012-2016</div>
<div>Employment</div> <div><div>Programmer</div><div>SUMO Digital Pune</div></div> <div>Snake Pass</div> <div><ul style="list-style-type: none">Implemented shader based sphere+plane interaction system to simulate collision between snake and grassDeveloped Maya scripts to easily create rigs for physics simulationWorked with Xbox One and PS4 APIsUtilized: UE4, C++, Python, Maya</div> <div>RAID WW2</div> <div><ul style="list-style-type: none">Optimized asset cooker to reduce vertex buffer memory by ~30%Reduced GPU memory utilization by adding runtime texture coordinate compressionAdded improvements/bug fixes to shader effects pipelineImplemented search and filter functionality for XboxOne session managementUtilized: C++, LUA, PIX Profiler, Razor GPU</div> <div>Team Sonic Racing</div> <div><ul style="list-style-type: none">Optimized GPU performance on Xbox OneAdded new rendering features (IBL for forward pass, BC5 normal texture compression)Extensively worked on Xbox One to add platform features (save game, achievements, leaderboards, multiplayer and matchmaking).Added AI, UI and new Editor features.Utilized: C++, PIX Profiler, Xbox One tools, Maya</div>			<div>July 2016, Present</div>

<p>Personal Projects</p> <p>Physics Editor is a lightweight, browser-based Box2d powered physics editor and simulator</p> <ul style="list-style-type: none"> – Developed an easy to use user interface to create and visualize Box2d world – Implemented concave mesh decomposition algorithm to triangulate complex shapes – Added support to export scenes to Unity, SpriteKit(iOS), LibGdx, Cocos2d..) – <u>Utilized:</u> JavaScript, CSS, C++, C#, Java, ObjectiveC <p>2d OpenGL Game Engine</p> <ul style="list-style-type: none"> – Developed native C++ engine for Android – Implemented rendering pipeline to support custom GLSL shaders and post process effects – Integrated OpenAL to add audio effects to the game – Added support for simple AABB collision detection – <u>Utilized:</u> C++, Java <p>3d OpenGL Game Engine</p> <ul style="list-style-type: none"> – Implemented Deferred+Forward rendering pipelines to draw opaque and transparent object – Added HDR support using exposure tone mapping technique – Order independent Transparency to render transparent objects using Weight Blended OIT – Added support for importing FBX file for rigged and animated models. – Integrated NVidia PhysX – <u>Utilized:</u> C++ 	
<p>Skills</p> <p>(proficient) C++, UE4, Graphics Programming</p> <p>(familiar) Java, Javascript, ObjectiveC, Maya</p>	