Roy Koganti

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Education

Carnegie Mellon University, Entertainment Technology Center (ETC), Pittsburgh **Aug 2015 – May 2017**

- Masters of Entertainment Technology

Carnegie Mellon University, School of Computer Science and Mellon College of Science **Aug 2011 – May 2015**

- Bachelor of Science in Computer Science, Bachelor of Science in Mathematics, Minor in Game Design

Skills

Programming

- Python, C#, C, C++, Java, JavaScript, HTML/CSS

Software

- Git, Perforce, SVN, Unity, Audition, Premiere Pro, Maya, Blender

Courses Taken

- Artificial Intelligence, Computer Graphics, Parallel Computing and Architecture, Algorithms Design and Analysis, Web Applications Development, Computer Game Programming, Game Design Prototyping and Production, Role Playing Game Writing Workshop

Experience

Engineering Intern, Schell Games, Pittsburgh **May 2016 – Present**

- Currently doing a fall Co-op. Working on gameplay, client-side networking and shader programming in multiple Virtual Reality (VR) games utilizing the Oculus, Gear VR, Google Daydream, and Playstation VR.
- Helped with performance optimizations for multiple games, including 'I Expect You To Die', to bring frame rate up to platform standards.
- Complete ownership over all the computer graphics and AI features on a currently in development VR game

Research Assistant, Robotics Department, CMU **Dec 2014 – May 2015**

- Participated in a research project focused on developing smarter, self-learning artificial intelligence for video game companion non-player characters (NPCs) to enable them to adapt to each individual's play style.
- Created a comprehensive game model for the planning algorithms to use, further developed the logic of the AI algorithm, created a prototype testing scene and programmed the AI of enemies. Tested and implemented code on Bethesda's Skyrim game.

Research Intern, Institute of Infocomm Research (I2R), Singapore **Jan 2009 – Feb 2009**

- Worked in the Attention Deficit Hyperactive Disorder (ADHD) project. Worked to improve I2R's Brain-Control Interface (BCI) system and design compatible games to implement in hospitals to treat children with ADHD.
- Developed a BCI compatible 2D platform game, using Java. It was used in pilot trials with encouraging results, which eventually led to its use in clinical treatment across children hospitals in Singapore.

Academic Projects

Nova – Virtual Reality Exploration in Collaboration with Viacom (ETC), Programmer and Producer

- Developed 2 VR experiences for Viacom Next, using the HTC Vive and Unity, that are showcased in their demo room in their headquarters. Helped with the gameplay and framework programming for both games.
- Also acted as the producer, being responsible for client-team and faculty-team communications, documentation of our project, and making sure that the project was on track.

Building Virtual Worlds (ETC), Programmer, Producer and Sound Designer

- Worked in teams of 5 to create highly interactive games using Unity, on a bi-weekly basis and changed teams every round. Utilized non-conventional platforms like the Oculus Rift, Google Tango, PS Move and Kinect.

Parallel Computing and Architecture Course, Final Project (CMU) – Simulating Propagation of RNA Viruses

- Implemented a C++ simulation of the propagation of viruses between humans in different types of environments. Coded the representation of the environments, programmed the behavior of the virus propagation and then integrated CUDA to speed up the simulation.

Web Application Development Course, Final Project (CMU) – Keepin' It Realtime

- Developed an interactive website using Python and Django to host multiplayer games, made in the Unity game engine. These games can be played in real-time against other users of the site. Developed and hosted 3 multiplayer games, a platformer, a chess game, and a shooter.

Personal Projects

Junk Food Pilgrimage – A mobile game for Android devices. Lead Programmer

- Built a game using Unity for the Global Game Jam 2016, in a team of 6 and went on to release it on Google Play. I programmed the gameplay, touch controls, and integrated Google Play Services.