

Riley Hanzhang Niu

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OBJECTIVE

- An internship or research opportunity in software engineering , computer graphics, or game design fields

EDUCATION

Cornell University, College of Engineering

Bachelor of Science in Computer Science, Minor in Math; GPA: 3.65/4.0

Ithaca, NY
Expected May 2020

Relevant Coursework: Algorithm Design, Discrete Structures, Linear Algebra, Statistics, Functional Programming, OO Programming & Data Structures, Computer System Organization, Introduction to Computer Vision, Computer Game Architecture, Web Programming & Data Visualization, Introduction to C++

North High School

Top 5% of Graduating Class

Phoenix, AZ
May, 2016

SKILLS

- **Languages:** Java, C/C++, C#, Python, HLSL, OCaml, Haskell, JavaScript, PHP, HTML, CSS, Swift 3
- **Tool & Libraries:** Unity, OpenGL, MySQL, Linux, Git, SVN

EXPERIENCE

NetEase Games

Game Engine Intern (Engineering Co-op Program)

Hangzhou, China
June 2018 - December 2018

- **Revelation:** an upcoming MMORPG mobile game powered by Unity3D
 - * Worked on data pipeline, scene management, and custom tool development to optimize game quality using C# scripting in Unity
 - * Collaborated with artists to research, create and optimize graphics shaders and relevant rendering techniques for stylistic and photorealistic asset production, including character, environment, lighting, and PBR material creation
 - * Researched and implemented a non-photorealistic image filtering functionality for the camera feature in the game
 - * Created a Hausdorff-based mesh-reduction tool for asset LOD optimization

PROJECTS

- **Volumetric Cloud Simulation:** A real-time volumetric cloud rendering solution for Unity mobile projects, using auto-generated meshes, perlin noise textures and custom lighting calculations
- **Embarkment:** A 2D desktop game project combining two-stick shooter and tower defense gameplay based on LibGDX and Java
 - Worked as the lead programmer for game physics, AI implementation and asset integration
- **Big Red Mecha:** A Unity virtual reality tower defense game project based on real-time views in Cornell campus
- **Man in the Shadow:** A 2D desktop puzzle game as a Hackthon project developed using Unity and C#
- **Website for Local Business:** A commercial website for local business with admin system, developed with MySQL database, interactive PHP and JavaScript functionalities as a group project
- **E-Pin:** An electronic prototype developed in Cornell Make-a-thon to solve child lost problem; the prototype uses Arduino board with Infrared Receiver Sensor to keep track of distance, which is synced with a mobile app for control

ACTIVITIES

- Cornell Creative Computing Club
- Placed 5/20 in Cornell Hackathon with rapid prototyping
- The Scientista Foundation for Women in STEM