YIFAN SONG

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Computer science undergraduate interests in, CG and CV.

EXPERIENCE

Co-founder and Software Engineer of RhythMo **Jan 2021 – present**

RhythMo is a new technology company focused on development of lightweight virtual digital human generation and driving technology. I am both a co-funder of the company and software engineer researching and developing the new CPU only or portable device based monocular RGB motion capture and driven solution.

Internship as Computer Graphics Engineer in Netease Games(Guangzhou) **Jul 2021 – Sept 2021**

Netease Games is an affiliate of NetEase (NASDAQ: NTES). NetEase Games is the 2nd largest game developer worldwide by revenue.

Research Assistant in VDI center **Dec 2020 – present**

Visual and Data Intelligence Center focus on computer vision and computer graphics. My current topic in VDI is about monocular full body human motion capture.

PROJECTS

A Taste of CNN Based Gaze Estimation **Dec 2020**

- A CNN based gaze estimation with almost SOTA accuracy developed with PyTorch.

SPH Based Fluid Simulation with Rigid Body Two Way Coupling **Dec 2020**

- Incompressible SPH based fluid simulation with two way coupling with a cube.
- Spatial hash spped up and boundary sph particals for rigid body simulation.
- Implemented in pure C++ and offline rendering with blender.

COOL compiler **Dec 2018**

- Implementing a compiler with lexical analysis, parsing, semantic analysis, and code generation to MISP.
- Basic semantic and syntax analysis are done and support object oriented programming with inheritance

A star plane fighting game **Dec 2020**

- A star plane fighting game developed with unity which has cool space ship fighting part and space station communication part.
- The game fully supports Xbox 360 controller and localized for both Chinese and English with XML.

Full body motion capture with sound assistance(In progress) **2020 - present**

- This project aims to assist data-driven monocular camera full body human motion capture with sound input.
- Comparing to traditional monocular 2d motion capture, this project aims to enhance the performance and also the visual effects with the audio and input as assistance.

Lilith game development competation **2020**

EDUCATION

Shanghaitech University, Computer Science and Technology **2018 – present**

- GPA 3.3, TOEFL 102, GRE 155(verbal) + 169(math)

University of Michigan, Ann Arbor **Feb 2021 – May 2021**

- Transfer student in LSA, GAP 3.8

SKILLS

- Game Development: Unity, OpenGL, Direct3D, Computer Graphics
- Frequently Used PL: C/C++, C#, Python, Lua
- Machine Learning: Tensor Flow, Cuda, Caffe

- Other: (Arch) Linux, (Neo)Vim, Visual Studio, JetBrains