# YIFAN SONG

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Computer science undergraduate interests in CG and CV and more.

## 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.

## WORK PROJECTS

**RhythMo Monocular RGB Based Motion Capture**                                    **Jan 2021 – Present**

- Only CPU or single iPhone needed for over 25fps motion capture.
- Able to drive multiple popular human model type including fbx, vrm and much more.
- Full body capture and model driving solution with body, hand and face.

**Shaderlab Deserializer**                                                        **Jul 2021 – Sept 2021**

- A deserialize and serialize library for Unity Shaderlab.
- More comprehensive API than Unity build in serializer.
- Support and extending the ability of Shaderlab.

## COURSE PROJECTS

**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 speed up and boundary sph particles 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 Taste of CNN Based Gaze Estimation**                                          **Dec 2020**

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

## 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

- Frequently Used PL: C/C++, C#, Python, Lua
- Machine Learning: Tensor Flow, Cuda, Caffe