Yuhong Chen

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Education

Georgia Institute of Technology 08/2023 – 04/2025 (Expected)
Master of Science in Computer Science Atlanta, GA, USA
- Courses: Computer Animation, Computational Photography, etc.

University of Michigan 09/2019 – 04/2023
BSE in Computer Science, GPA 3.75/4.00 Ann Arbor, MI, USA
- Courses: Distributed Systems, Computer Vision, Game Design, etc.

Work Experience

BlueBird Studios: Treat Team 09/2021 - 08/2023
Unity Game Developer - Basecamp Lead Part-time Remote / Ann Arbor, MI, USA
- Initiated the Basecamp scene, one of the two primary game scenes in Treat Team
  - Implemented the Basecamp code architecture, including procedural animal generation, state machines for buildings and animal behavior management, and a currency system for item purchasing and login rewards.
- Designed tens of puzzle levels and characters' animation on Basecamp and in puzzle levels.
- Organized the game beta testing with hundreds of players

Research Experience

NeuRRoVR: Low-Cost Virtual Reality for Rehabilitation 05/2022 - 04/2023
Michigan Medicine NeuRRoLab, advised by Prof. Chandramouli Krishnan Ann Arbor, MI, USA
- Developed operating mechanisms to allow users to experience hand-related VR activities, record joints' coordinate transformations, and view correspondent analysis without the use of VR trackers and/or VR headsets.
- Investigated scalable hand mirroring with constraints to allow mirroring scales from 0% to 200% without unnatural finger bent.
- Researched VR hand interaction with VR objects to reduce the likelihood that objects fly away after colliding with a hand for a smoother activity experience.

SIM: Real-Time and Virtual Driving Simulator 05/2021 - 12/2022
Michigan Multidisciplinary Design Program, advised by Prof. Paul Green Ann Arbor, MI, USA
- Programmed the backend of the simulator in Unreal4, including road section encoding, urban traffic light system, and computer-controlled vehicle simulation.
- Adopted multi-threading with QtThread on user interface operations and server backend operations to eliminate observable lagging from backend computations.

Projects

ShardMaster & Key-Value Service
- Employed Paxos replicated state machine to support the key-value service in heavy multi-task situations while preserving the data consistency between concurrent requests.
- Applied consistent hashing to optimize the key searching efficiency from O(n) to O(log n)

Personal Project
- EngineYC: Built a simple renderer using OpenGL.

Skills

Programming Language: C++/C#/C, Python, Golang, Lua, Matlab, and Javascript
Tools: Unity, Unreal4, SQL, and Blender