Chengzhe Li

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EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST **2020-2021**
M.S. Computer Science Candidate from CICS *GPA:4.0*

UNIVERSITY OF MASSACHUSETTS AMHERST **2016-2019**
B.S. Computer Science from College of Information and Computer Science *GPA:3.6*

- **Awards & Activity:** Bay State Master, Course contributor of Computer Networks, ESL Activity Assistant

PROFESSIONAL EXPERIENCE

TENCENT **SHENZHEN, CHINA**
Software Engineer Intern *May 2020 - July 2020*

- Worked as a part of IEG(Interactive Entertaining Group)-CTG(Core Technology Group), our project is a distributed framework for improving the efficiency of Unreal Engine. The framework is developed in .NET and can be used in UBT(Unreal Build Tools), Lightmass, and ShaderCompiling
- Implemented a new hybird distributing funciton and a test framework. Shortened the waiting time for 70%
- Got my self familiar with the existing framework and code fastly, learned to write code in strict standards.
- Tested and fixed known problems. Researched, designed, and implemented new distributing methods to improve efficiency problems. Wrote test framework to evaluate the improvement of new methods
- Worked with CI to make the project pipelined and efficient. Used data virtualization tools to analyze logs
- Learned how to get into a large project, work in an Agile team to deliver the product quick and correctly, finding and fixing problems, develop and test with tools, adding new functions to a existing framework, etc..

PROJECTS

CookingPapa

- Game developed used Unity. The idea is the player needs to fight with the monsterized animal or vegetable to get the food material. Some other material will be hidden on the map or looted by some other ways. After grathering all materails, there will be real-life simulated cooking stage for player to play and learn
- Chose the assets used, deigned the game logic, and implemented the gameplay. Set up the scenes, UI, etc..
- Added videos, BGMs, and sound effects to make the game more enjoyable
- Added clear instructions, particle systems, and physical to make the game harder but more interesting
- The playable game and demo video are available on my Github

Pygmy

- Pygmy is is simulated online bookstore micro servers. We built frontend server, order server, and catalog server as three separate RESTful micro servers by Flask, and a simple command-line user interface to interact with it. Worked with Sharuya
- Used Sqlite3 as the lightweight database and storing information on catalog serverThe frontend server support three operations, search(category), lookup(item), and buy(item). The first two will query the catalog server, the third one goed to order server, then the order server will update the catalog server and return
- Besides the basic functionalities, we implemented support for replication and synchronization on backend servers, cache on frontend servers, load balancing, and crash fault tolerance and recovery. We also used docker to containerize our microservers so it's easier to deploy

Bazaar

- P2P networks built in Python, used pyro4 as RPC library, nodes were able to rise "lookup" call to buy items from other nodes on the network. The message would be passed by RPC function. The structure of the network was configurable. Multiple transactions can be processed at the same time. Worked with Sharuya

SKILLS

- Proficient in C/C++, C# and Python, familiar about Java, and always willing to learn new languages
- Developing experience in Unity and UE, knowledge about game programming and underneath
- Knowledge and experience of implementing and using AI algorithms and ML models and concepts
- Understanding of distributed systems, complicated operating systems, and secure decentralized systems
- Programming experience with RESTful, RPC, multihreading distributed system, familiar with docker
- A Good knowledge base of Computer Graphics, Linear Algebra, and software engineering
- Passion on Games, Music, Technology ,and new areas. I'm always hungry to learn, and good at it!

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