Chengzhe Li

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EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST   **Expected Graduation: Dec 2021**
M.S. Computer Science Candidate, CICS   *GPA:4.0*
- **Activity:** Bay State Master, Course Assistant for Secure Distributed Systems, CICS Scholarship
- **Relevant Coursework:** Distributed & Operating Systems, Secure Distributed Systems (Blockchain), Comp & Network Security, Machine Learning, Computer Vision, 3D Vision, ML for Sys, Advanced Algorithm

UNIVERSITY OF MASSACHUSETTS AMHERST   **2016-2019**
B.S. Computer Science, College of Information and Computer Sciences   *GPA:3.6*
- **Relevant Coursework:** Algorithm, Operating Systems, Artificial Intelligence, Computer Networks

PROFESSIONAL EXPERIENCE

Software Engineer, Intern   **Microsoft**   **May 2021 - July 2021**
- Implemented stateless and scalable backend architecture to enhance a shared interview code editor
- Added verification to protect both frontend and backend services (including ASP.NET and Node.JS servers)
- Created Serverless Function version (Azure Function) to automate scripts used by our team
- Attended FHL(Fix, Hack, Learn) event and demonstrated our editor to the whole group in a video demo
- Fixed existing problems in login, synchronization, interview history, and other bugs
- Designed and implemented automation tests for web application functionalities using Selenium
- Researched alternative libraries for backend synchronization service, refactoring backend structure
- Technologies used: React, Azure (VM, Function, DB, VMSS), K8s, Docker, Postgres, Redis, MongoDB

Software Engineer, Intern   **Tencent**   **May 2020 - July 2020**
- Contributed to a distributed framework developed in .NET for improving the efficiency of Unreal Engine
- Implemented a new configurable hybrid distributing function, shortening CPU sync time by 70%
- Conceptualized and implemented the testing framework with 6 distributing methods to evaluate the improvements with configurable parameters, deciding the best approach based on simulating results
- Collaborated with CI to make the project pipelined and efficient, analyzing logs with data visualization tools
- Learned how to explore large codebase, work in an Agile team to deliver product using Agile methodology, finding, and fixing problems, developing, and testing with tools, implementing new functionality.

PROJECTS

CompressedNeurons
- Worked on existing research project SuperNeurons(Written in C++), a framework designed to improve GPU memory efficiency. Researched, reproduced, and tested the existing framework. Implementing a new allocating method to further improve and efficiency to adapt the larger batch size and deeper network.

Pygmy
- Pygmy is a simulated online bookstore using microservices. We built frontend servers, order servers, and catalog servers as three separate RESTful microservices by Flask, and a simple command-line user interface to interact with it. Worked in a team with two
- Used Sqlite3 as the lightweight database and storing information on the catalog server. The frontend server supports three operations, search(category), lookup(item), and buy(item) goes to two backend servers.
- 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

SKILLS
- Proficient in C#, C/C++, and Python, familiar with Java, JavaScript
- Understanding of distributed systems, complicated operating systems, and secure decentralized systems
- Programming experience with RESTful, RPC, multithreading distributed system, familiar with Docker
- Understanding of Machine Learning Concepts and experience on TensorFlow and PyTorch
- Familiar with network protocols, Experience with AWS, GCP, and Azure, familiar with Linux
- Passion for Technology, Music, Games, and new areas. Always hungry to learn, and good at it!