Yuanbo Li

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Github: https://github.com/Liyb2002 Website: http://www.yuanboli.link/

Education

Brown University   **(Sep 2022 - (EXPECTED) May 2024)**

M.S in Computer Science

Columbia University, Columbia College   **(Sep 2018 - May 2022)**

B.A in Computer Science, B.A in Mathematics

Relevant Courses: Distributed Systems, Cloud Computing, Advanced Programming, Natural Language Processing, Computational Complexity, Analysis of Algorithms, Abstract Algebra, Modern Analysis, Optimization, Statistics and Probability, Data Structures

Experience

ARPA Technology   **(May 2022 - Aug 2022)**

Software Engineer Intern
- Designed and implemented ***Behavior Driven Tests*** for Randcast, a *distributed* random number generating system for Blockchain Networks.
- Coded ***smart contracts*** in solidity using ***Truffle framework***. Deployed on Ethereum Network.

Tencent Cloud   **(May 2021 - Aug 2021)**

Technical Product Manager Intern
- Participated in ***architecture design*** for blockchain-based IPFS (InterPlanetary File System).
- Wrote 10+ pages ***documentation*** helping open source engineers to build on our IPFS system.
- Drafted 30+ pages whitepaper for business development.

Collaborative Prediction Market Lab, Columbia University   **(Sep 2021 - May 2022)**

Advisor: Prof. Siddhartha Dalal

Research Assistant/ Software Engineer
- Built App backend using ***Django framework*** and ***REST API***. Deployed service on ***AWS EC2***. Retrieved on-chain data using ***web3js*** for analysis.
- Adapted and implemented ***AMM algorithm*** to reduce the slippery rate by 15% each transaction.

Projects

Distributed Database

(based on 6.824 Distributed Systems, MIT)
- Built a ***fault-tolerant*** KV database using ***Paxos-based consensus***. Achieved ***scalability*** by using "shards" that partition keys over a set of replica groups.
- Built DFS search model to iterate through corner cases and guarantee robustness of the system.

Full Stack Blog Services

(based on COMS6156 Cloud Computing, Columbia University)
- Built ***full stack*** web app using ***Django framework*** and ***REST API***. Deployed service on ***AWS EC2*** and connect to database on ***RDS***. Used ***DynamoDB*** and ***API gateway*** for user profile storage and requests.

3D Metallic Ball Rendering

(based on CSCI1230, Brown University)
- Implemented ***Phong Reflection Model***, ***Monte Carlo raytracing***, ***Cook-Torrance Model***, etc to render 3D metallic ball with constantly changing shadows using ***OpenGL***.

Skills

Programming Languages: C++, Python, Golang, Solidity

Frameworks/Libraries/Tools: OpenGL, Django, web3js, React, MySQL, Git, AWS, Adobe Premier, Adobe Illustrator, Adobe Photoshop, Autodesk Maya