Shuntian Liu

Final Year Computer Science Student

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Education

2019–2023 **BA & MEng Hons Computer Science**, *Magdalene College, University of Cambridge*
Modules include: Distributed Ledger Technologies: Foundations and Applications, Object-Oriented Programming, Cloud Computing, Concurrent and Distributed Systems, Databases

2017–2019 **A-Levels**, *Dulwich College*, Dulwich Common, London, *Maths (A*), Further Maths (A*), Physics (A*), Computer Science (A*)*

Work Experience

July–Sep 2022 **University Research Programme Intern**, *University of Cambridge*
Implemented a distributed scheduler with an asynchronous consensus algorithm in Kubernetes.
Practised concurrent programming and thinking such as threading and locking in Go.
Scheduling algorithm achieved 100% latency reduction compared to the default centralised Kubernetes scheduler.

July–Sep 2020 **University Research Programme Intern**, *University of Cambridge*
Implemented rope representation of strings and compared its efficiency with the array version.
Practised programming and debugging in OCaml and C by writing unit tests and using debuggers such as `ocamldebug`.
Improved performance of string concatenation and managed to keep the speed of string iteration at the same order of magnitude.

Projects

2021–2022 **Personal Project**
Designed and Implemented a distributed datalog (a database query language) engine in Erlang that computes datalog queries in a MapReduce fashion.
Awarded as a highly commendable dissertation (top three) by the University of Cambridge Computer Laboratory.

Feb–Apr 2021 **Univerisity Group Project**
Developed a flight landing simulation app for Android with a team of six fellow students and one client from the industry.
App successfully used in the real flight environment by the client.

Skills

Teamwork Entered Cambridge Hackathon and developed an app by fitting user's financial history into different models and output suggestions based on the model.
Communicated frequently throughout the competition and delegated tasks according to everyone's expertise.

Independent learning Explored independently the implementation of the TCP protocol.
Implemented a simple TCP sender/receiver that communicates successfully with a real web server.

Interests

Music Play the Erhu — a Chinese musical instrument.
Involved in the University's Chinese Orchestra Society.