SIYUAN DONG

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SUMMARY

I am a junior majoring in Computer Science from Peking University. I have accumulated a great amount of experience in research. My interest is in Data Stream Processing, Network, Systems and Machine Learning. I enjoy the process to discover, define and solve a problem. I am also good at implementing the ideas with codes, especially in C++ and python.

EDUCATION

Peking University Beijing, China
Bachelor of Science, Computer Expected May 2024

RESEARCH EXPERIENCE

University of California – Berkeley Berkeley, CA
Research with Prof. Sylvia Ratnasamy 2023 - Present
Interesting Problems in Network System in IoT Scenario.
- Using data from different databases to do regression without leaking raw data nor violating user privacy.
- Real-time allocation of server into clouds to minimize the egress fee.

Peking University Beijing, China
Research with Prof. Tong Yang 2022 - Present
Data Processing in Network and Database
- Key-Value Set Secure Aggregation and Privacy
- Temporal membership query
- Measurement of Per-flow latency distribution
- Real-time frequency estimation of data streams
- Real-time detection of interruption in data streams
- Real-time detection of anomalies in data streams

SKILLS & TECHNIQUES

- C/C++ programming
- Python programming
- Java programming
- SQL programming
- Front-end frameworks (Javascript, HTML) programming

LEADERSHIP EXPERIENCE

Peking University Beijing, China
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  Director, Culture and Sports Department of EECS college 2022 - 2023
  Built up the department from scratch. Held various cultural and sports activities to enrich students' campus lives.

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  Vice Chairman, Student Union of EECS college 2022 - 2023
  Assisted chairman in running the Student Union of over 100 students. Directed various events.

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  Director, Comprehensive Administration Center in Culture and Sports Department of Peking University 2021 - 2022
  Department operation. Contributed to various evening parties.

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  Section Chief, External Liaison Division in Student Union of EECS college 2021 - 2022
  Closed deals with companies on sponsoring our events. Directed various events.

PUBLICATIONS

Yuhan Wu **Siyuan Dong,** Yi Zhou and Tong Yang. (2023). "KVSAgg: Secure Aggregation of Distributed Key-Value Sets". In: IEEE ICDE 2023 (to appear).

Zhuochen Fan Yubo Zhang, **Siyuan Dong** and Tong Yang. (2022). "HoppingSketch: More Accurate Temporal Membership Query and Frequency Query". In: IEEE Transactions on Knowledge and Data Engineering (TKDE) 2022, pp. 1–6. doi: 10.1109/TKDE.2022.3221111.

WORKS IN PROGRESS

Siyuan Dong, Wenhan Ma, Yuxuan Tian and Tong Yang. "InterruptionSketch: Real-time Detection of Interruption in Data Streams".

Zhuochen Fan, **Siyuan Dong,** Yuhan Wu and Tong Yang. "FriendlySketch: Accurately Estimating Per-Flow Latency Distribution".

REFERENCES

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