THE HONG KONG POLYTECHNIC UNIVERSITY
DEPARTMENT OF COMPUTING

Post Specification

Full-time Research Assistant / Postdoctoral Research Fellow (several posts)

[Appointment period: 6 months initially, with possibility of further appointment and admission as PhD student]

The appointee is expected to participate in blockchain research and projects according to Prof. Jiannong Cao or his delegates' instructions. More specifically, the appointee is expected to 1) design and implement new algorithms and protocols regarding web3 data infrastructure, blockchain data security, and blockchain interoperability 2) develop and demonstrate blockchain-related systems and applications. The appointee will undertake one or more of the following tasks:

(a) design and develop algorithms and protocols enabling web3 data infrastructure, including distributed data storage and search, incentive mechanisms, secure data sharing, etc.

(b) design and develop blockchain data security protocols leveraging trusted execution environments, ring signature, etc.

(c) design and develop blockchain interoperability protocols using techniques of zero-knowledge proof, relay networks, sidechain, etc.

(d) develop and demonstrate blockchain-based governmental approving system for building information models.

(e) develop and demonstrate blockchain-based tokenization system of sustainable activities.

Qualifications

The applicants should:

(a) have a master's or bachelor's degree in computer science, software engineering, construction informatics, or other related ones.

(b) have rich hands-on experience and proven knowledge in blockchain system development, especially Hyperledger Fabric and Ethereum, or building information modeling.

(c) be knowledgeable in at least one of the following domains: cryptography, algorithm design (preferable distributed algorithms), system development, building information modeling.

(d) be familiar with programming in JavaScript, Go, Python, or C++.

(e) have a good command of English and communication skills.

Remuneration

A highly competitive remuneration package will be offered. Outstanding research assistants have the possibility to be admitted as PhD students under the supervision of Prof. Jiannong Cao or Dr. Shan Jiang.

Contact Us

- Prof. Jiannong Cao (email: jiannong.cao@polyu.edu.hk)
- Dr. Shan Jiang (email: cs-shan.jiang@polyu.edu.hk)
- Dr. Shan Wang (email: shan-cs.wang@polyu.edu.hk)

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