THE HONG KONG POLYTECHNIC UNIVERSITY
DEPARTMENT OF COMPUTING

Post Specification

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

[Appointment period: 3 months to 12 months initially, with possibility of further appointment]

The appointee is expected to participate in the blockchain projects according to Prof. Cao or his delegates' instructions. The appointee will develop new methodologies of blockchain interoperability, smart contract verification, and web3. The appointee will also develop and demonstrate blockchain-related systems and applications.

The candidate is expected to undertake one or more of the following tasks:

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

(b) design and develop smart contract formal verification approaches and tools using techniques of state machines, fuzzy testing, graph machine learning, etc.

(c) design and develop infrastructure, algorithms, and protocols enabling web3, including distributed data storage and search, incentive mechanisms, secure data sharing, 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, or other related ones.

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

(c) be knowledgeable in at least one of the following domains: cryptography, algorithm design (preferrable distributed algorithms), formal verification, system development.

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

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

Applicants are invited to contact Prof. Jiannong Cao (Tel: 2766 7275; email: jiannong.cao@polyu.edu.hk) or Dr. Shan Jiang (email: cs-shan.jiang@polyu.edu.hk; WeChat: cs-shan-jiang) for further information.

Remuneration

A highly competitive remuneration package will be offered. Applicants should state their current and expected salary in the application.

Apr 2023