Principal Engineer in Distributed Systems

Sydney, Australia
Permanent Role

At Redbelly, we aspire for a world where everyone, everywhere has equal access to the economic infrastructure they need to improve their lives and are hard at work building our revolutionary open finance platform built on distributed ledger technology to deliver on that vision. Our purpose is to make financial relationships fair, efficient and useful for everyone. We aim to make distributed ledger technology consumable to users and businesses in meaningful ways that improve the way they transact.

At the heart of the Redbelly platform lies our novel Democratic Byzantine Fault Tolerant (DBFT) consensus algorithm developed under the leadership of our CTO, Associate Professor Dr Vincent Gramoli in collaboration with The University of Sydney and CSIRO's Data61.

While we are immensely proud of our achievements to date which, among others, include an unprecedented consensus performance of 100,000 TPS with 100 nodes tolerating up to 33 byzantine nodes, a deterministic consensus translating to quasi finality and a highly secure blockchain that does not fork, our gaze remains firmly on the future and on the numerous leading edge technological challenges we will have to overcome in order to realise our ambition.

To make this possible, we see ourselves first and foremost as a product company where passionate product, engineering and delivery people work and ideate collaboratively as part of autonomous product teams to unleash the full potential of our technology to solve real-world problems for real businesses through captivating user experiences.

If you are looking to make a meaningful and positive change in the world by working with cutting-edge technology to bring fairness and innovation to financial relationships that impact everyone, this is the place to be.

The Role

The Technology and Research (T&R) team at Redbelly is a new kind of lab that bridges the worlds of academic theory and industry practice to advance the science and technology of fair economic relationships. We collaborate with the Scalable EVM team and the Consensus and Networking team to solve hard technical and conceptual problems. The Principal Engineer Distributed Systems will have the opportunity to interact and help derisking the tasks of the engineering teams by prototyping

proof-of-concepts. We are seeking engineers or developers with a strong research background and an interest in blockchains and web3 to join the group. Specific research areas of interest include distributed computing, cryptography, security, economics, and governance. This list is not exhaustive and we encourage applicants with different backgrounds who may have unique perspectives on the space to apply.

Responsibilities

The Principal Engineer in Distributed Systems (PEDS) is responsible for efficiently designing the secure distributed system solutions and helping develop the distributed computing and cryptographic skills of the engineering teams. The PEDS interacts and reports to the CTO and is in charge of defining precisely the distributed system solutions for the team to implement them while ensuring security (fault tolerance and cryptography) and efficiency. The PEDS will communicate development strategy to the teams via their respective team leads, and in particular:

- Provide subject matter expertise in distributed systems and/or cryptography to the technical teams
- Interact with CTO to develop and evaluate proof-of-concept protocols and improvements
- Pursue applied research on topics relevant to the company
- Work with the teams on technical research problems
- Contribute to blog posts, white papers, and other public expository content

Qualifications

Research degree in computer science (PhDs) (exceptional Honours and Masters students will also be considered)

Professional experience

Demonstrated experience in distributed systems, operating systems, networking or cryptographic protocols.

Essential skills

- Experience in designing distributed algorithms or architectures
- Ability to understand distributed systems or security research literature
- Knowledge of cryptography
- Passionate and knowledgeable about blockchains/Web3 and their underlying technologies

Non-essential skills

- Experience in optimizing system software
- Familiar with research activities

REDBELLY

Personal Traits
- Good verbal and written communication skills
- Precision in description
- Tact diplomacy and sensitivity

Key Internal Interfaces
- CTO
- Team Leads, Software Engineers
- Principal Engineers

Redbelly is an equal opportunity employer. We encourage everyone from all backgrounds to apply.

To apply, please email your expression of interest and resume to divya.puri@redbelly.network. (Optional: 1-3 Letters of recommendation: recommenders should email their letters of support to divya.puri@redbelly.network with the name of the applicant in the subject line.)