IT Employee – Timestamping Consensus Protocols at Department of Computer Science, Aarhus University

Position Overview: We are searching for a motivated **Bachelor's student** to work on an innovative research project focused on **timestamping consensus protocols**. The project aims to facilitate smoother Layer-2 blockchain implementations, particularly in **asynchronous network environments**.

The intern will be responsible for benchmarking three different families of consensus protocols (leader-based, longest-chain and DAG-based), integrating timestamping mechanisms, and analyzing performance. The ideal candidate should have taken the distributed systems course, or prove similar knowledge, and have experience with **Rust** and **Python**.

The position is for 18 hours/week and the duration is 3 months - starting on June 1st 2025.

Key Responsibilities:

- Conduct research on various consensus protocols with timestamping mechanisms.
- Benchmark the performance of three distinct protocol families.
- Analyze the impact of timestamping in asynchronous network conditions.
- Assist in the development and validation of research models.
- A potential research paper if the project succeeds.

Requirements:

- Interest in blockchain technology and distributed systems.
- Familiarity with consensus protocols.
- Basic to intermediate knowledge of **Rust** and **Python** is a plus.

Benefits:

- Hands-on experience in blockchain research.
- Opportunity to contribute to cutting-edge research.
- Work closely with the research team, getting a taste of life in academia.
- Potential for publication in a scientific journal or conference.

Place of work: Department of Computer Science, Aarhus University. Åbogade 34, 8200 Aarhus N

Formalities and salary range

Salary and terms as agreed between the Danish Ministry of Taxation and the Confederation of Professional Unions.

Aarhus University's ambition is to be an attractive and inspiring workplace for all and to foster a culture in which each individual has opportunities to thrive, achieve and develop. We view equality and diversity as assets, and we welcome all applicants.

The application must be submitted via Aarhus University's recruitment system, which can be accessed under the job advertisement on Aarhus University's website.

Aarhus University

Aarhus University is an academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 38,000 students (FTEs) and 8,300 employees, and has an annual revenues of EUR 935 million. Learn more at www.international.au.dk/

Application Deadline:
30 April 2025

Faculty:
Faculty of Natural Sciences

Institute/Faculty:
Department of Computer Science

Academic contact person:
Ignacio Amores Sesar
Postdoc
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Vacant positions:
1

Hours per week:
18

Number of months:
3

Expected date of accession:
01/06/2025