Vacancy Notice

Chips JU TRAINEESHIP – 2024

Software developer

Reference: Chips-2024-05-Trainee

Closing date for submission: **18/11/2024, 23:59** *(CET, Central European Time, Brussels).*

The Chips Joint Undertaking (Chips JU) operates a traineeship programme. The programme gives trainees an understanding of the Chips JU and its role within the activities of the European Union, enables them to acquire practical knowledge of the Chips JU and its regulatory framework and to obtain professional experience in the course of their work. More information at: https://www.chips-ju.europa.eu

Description and goals:

The Chips JU is building up a knowledge graph, constructed as a graph database. This tool is intended to enable the Programme's staff to retrieve efficiently information on projects, participants, topics, etc. and navigate the portfolio of projects.

Under the supervision of a Programme Officer, the trainee will develop a data model for the intended knowledge graph. S.he will subsequently implement this data model as a graph database and test it. This development will be gradual, the data model being simple at first and integrating more types of nodes progressively (leveraging on the straightforward way graph database can grow in complexity). The knowledge graph will integrate structured data at first and progressively unstructured data, e.g. text from project description.

The trainee will demonstrate the knowledge graph to the Programme team on few mock-up cases designed with the Programme Officer. Subsequently, s.he will gather use cases and test the knowledge graph's pertinence on those use cases.

The second objective is to develop a Retrieval Augmented Generation-enabled prompt. The tools to achieve so are now becoming standard with graph databases. This is an important addition to substantially reduce the hallucination on the knowledge graph and enhance the pertinence of the output. As Chips JU already has a Python-based pipeline for topic modelling on projects, this will be the basis for tagging the knowledge graph as a RAG-like addition. The trainee will therefore use that additional information (LLM trained on projects' description) to enhance the knowledge graph.

What the trainee will get out of this project:

Practical knowledge of graph database and knowledge graph, their design and implementation

Practical use cases that can be addressed with a RAG-enhanced knowledge graph.

Requirements:

- Possession of a university degree at the time of applying. Candidates must provide copies of the diplomas or other relevant certificates.
- An excellent command of oral and written English and one or more other official Union languages.
- General knowledge in software engineering (requirements, architecting)
- Knowledge of database / graph database is valued but not necessary   .
- Knowledge in Python programming is a plus.
- Good communication skills (writing and oral).

Grant:

The Chips JU offers a monthly grant of 1418.19 € net per month and may pay a travel allowance to compensate the expenses incurred at the beginning and at the end of the traineeship from the place of residence, which is normally the address provided for correspondence. It is recommended to read carefully the detailed rules applicable.

The placements are for a period of maximum 6 months.

Grants awarded to trainees are not subject to the special tax regulations applying to officials and other servants of the European Union. Trainees are solely responsible for the payment of any taxes due on the grant they receive from the Chips JU by virtue of the laws in force in the State concerned. The

Chips JU does not cover sickness nor accident insurance and trainees must take out such insurance prior to the start of their traineeship at the Chips JU.

How to apply:

Interested candidates should apply on *career portal* at the latest by **18/11/2024, at 23:59 h**.

Selection Procedure/ Selection Criteria:

Applications have to fit with requirement in the present Vacancy Notice.

After analysis of CVs, the more suitable candidates will be invited to an interview.

The Chips JU will constitute a reserve list of potential trainees and will offer a trainee position when a position is available.

Indicative timing:

The present call is to select trainees to take duty within the year 2025.

The Chips JU takes care to avoid any form of discrimination in its procedures.

Independence and Declaration of Interest

Successful candidates will be required to make a declaration of commitment to act independently in the public interest and to make a declaration in relation to interests which might be considered prejudicial to their independence. Candidates must confirm their willingness to do so in their application.

APPLICANTS' PRIVACY POLICY IN THE CONTEXT OF SELECTION AND RECRUITMENT

The Chips JU, like other EU institutions, bodies, agencies and offices (EU institutions), may process your personal data (also known as personal information) for a number of reasons, from dealing with public requests for information, staff matters, procurement contracts, grant agreements etc.

This privacy statement governs the processing of your personal data on the basis of the European Regulation (EU) N°2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies on the free movement of such data ("EUI-GDPR") by the Chips

Joint Undertaking as part of your job application with us (as temporary agent (TA), contract agent (CA), seconded national expert (SNE), interim staff or trainee).

Find more about Chips JU Privacy Policy on our website here.