



2018-IPR-C-000-010219

Blockchain-based solutions for improving road transport emissions and efficiency

Position for:

Trainee

As the science and knowledge service of the Commission, the mission of Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <http://www.jrc.ec.europa.eu>

The Sustainable Transport Unit of the Institute, comprising more than 50 staff, provides scientific and technical support on clean and efficient fuels and vehicles for sustainable mobility.

Short description of activity:

The JRC is currently supporting major initiatives of the European Commission in the field of CO₂ emissions reduction from light and heavy duty vehicles. Novel methodologies are being developed for accurately quantifying emissions of various on road vehicles using experimental measurements and computer simulation methods. Blockchain is a novel technology for storing information in a secure, immutable and traceable way. Several blockchain-based implementations have been proposed to date related to logistics, car-pooling and emissions-credits trading. The proposed trainee project consists in joining on-going research programs on road transport generated CO₂ emissions and possible applications of blockchain technology that could contribute to their reduction.

Under the supervision of the advisor, the trainee will perform a detailed literature scan of the most prominent blockchain-based transport-sector related applications. The trainee will have to analyse the state-of-the-art with regards to blockchain technology and contribute in a feasibility study for using blockchain in emissions monitoring.

	<p>The trainee's support will involve developing computer code in Python programming language for linking existing STU datasets to a blockchain-based environment. Data analysis and drafting of the respective technical reports will be also essential part of the work.</p> <p><u>Qualifications:</u></p> <p><u>Essential:</u></p> <ul style="list-style-type: none"> • University degree in the fields of engineering (computer/automotive/communication) or computer science • Proven knowledge of computer programming • Good knowledge of spoken and written English (B2 minimum). <p><u>Advantage:</u></p> <p>Knowledge of one or more of the following will be an advantage: Python and solidity programming languages, data analysis, CAN/Automotive Ethernet, on-board diagnostics</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Directorate	Directorate C - Energy, Transport and Climate
Unit	C.4 Sustainable Transport Unit
Indicative duration	5 months
Preferred starting date	As soon as possible
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact:</p> <p>HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</p>