Vacancy: High-resolution urban overheating modelling

B-Kode invites applications for an experienced urban overheating computer scientist, to work in the context of the HORIZON CARMINE project. This project on “Climate Resilient Development Pathways in Metropolitan Regions of Europe” aims to bridge the local and regional scales by providing impact-based decision support services and multilevel climate governance supporting local adaptation, including both traditional and Nature-Based Solutions. The work performed in this vacancy will contribute to WP2 on “integrating climate physical risk assessment models and earth system processes” and will focus on developing very high-resolution models of urban overheating, combining physical-based modelling with advanced AI techniques.

Key Responsibilities:

- Develop and implement high-resolution scaleable and transferable urban overheating models.
- Utilise machine learning algorithms to emulate and improve upon existing numerical models.
- Provide at-scale, fit-for-purpose information on local climate hazards and impacts, and data-driven adaptation and mitigation strategies.
- Analyse large datasets to extract meaningful insights related to urban overheating.
- Work collaboratively with the CARMINE partners in charge of integrating climate physical risk assessment models and earth system processes.

Essential Qualifications:

- Masters / PhD in Machine Learning, Computer Sciences, Environmental Sciences, or a related field.
- Proficiency in numerical modelling and computer programming, with a strong emphasis on Python.
- Demonstrated experience in analysing large datasets.
- Excellent knowledge of climate sciences and urban meteorology.
- Ability to work independently with a solution-oriented mindset.
- Proven track record of creative, critical, and analytical thinking.
- Excellent command of English, both oral and written.

Preferred Qualifications:

- Experience with high-resolution urban climate models, especially in the context of drivers of urban overheating and thermal comfort.

- Previous work emulating numerical models using machine learning approaches.
- Experience with cloud computing environments and code sharing repositories.
- Showing initiative and a commitment to further develop the idea of shaping a global collective focused on urban environmental analytics and sustainable urban development.

General Conditions:

- This is a freelance position starting May 2024, with a contract duration of maximum 2 years.
- Open to self-employed professionals globally allowing for remote collaboration.
- Opportunities for collaboration with leading international institutes and attendance at international conferences.
- Compensation will be on a project or task basis, competitive and commensurate with experience and qualifications.

Application Procedure:

- Please send a 1-paragraph motivation letter and professional CV in a single pdf to matthias@b-kode.be.
- Include in the email subject the reference Vacancy/CARMINE.
- Include in your CV contact information of two people that may be requested to send a reference if the application is shortlisted.
- The application procedure will remain open until the right candidate is found.

About B-Kode:

B-Kode (www.b-kode.be), a Belgian-based company, is steadfast in its mission to furnish data-driven building blocks, analytics, and support services to forge a more sustainable and climate-resilient future. The company is adept in integrating technological advancements that are scientifically sound and foster urban sustainability and climate resilience. Its diverse portfolio encompasses projects that delve into high-resolution urban modelling, intricate analysis of Earth Observation data, and the application of AI-driven analytics to effectively tackle challenges related to urban heat, air quality, and the management of urban green spaces. Engaging in active collaborations with global partners and remote professionals, B-Kode is committed to establishing a worldwide collective of enthusiasts dedicated to urban environmental analytics, aiming to provide the building blocks for a better future.