Vienna Doctoral College on Digital Humanism

DIGHUM college

Ethics and governance of artificial intelligence

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The Materiality of AI and its Environmental Impacts

The Project

The datacentres, on which AI is trained and used, require large quantities of energy and water. Besides, the construction of datacentres has more than doubled in the past six years. Therefore, there is an urgent need **to better understand the sustainability of AI infrastructure.**

In my doctoral project, I will focus on these **environmental impacts and how aware users are** of them. I will highlight how we can be more aware of the trade-offs between environmental impact and the benefits of AI usage.

Interdisciplinary Approach

The methods will be a combination of **methodologies** from the fields of **social science and computer science.**

I will further incorporate my background in physics and philosophy of technology.

Research Methods

Applying **quantitative social science methods**, I will analyse whether an awareness among users exists, regarding the environmental impacts of AI. With qualitative methods, I will conduct **interviews with local communities** surrounding datacentres.

Considering both of those findings, I will **develop a tool** that focusses on the actual needs of the consumers and tries to decrease energy and water consumption.

Project Contribution

The project will contribute to **the understanding of the environmental impacts of AI by a broader public. It** will also provide a tool that can help AI users minimize their own impacts.