Self-Introduction

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The Unique Project in EPFL

Identify Optimal Configuration with a Machine Learning method in Multi-Criteria Decision Analysis

I worked on this project for 6 months in EPFL, as an intern Researcher, I was working on bridging the advanced AI techniques with the current research on Decision Makings in Energy System to reach the balance of profits, environmental impacts, and other perspectives.

From Software Engineering to Sustainable Engineering.

-Research Interests

With a bachelor's degree in Software Engineering (SE), I am now diving into another SE—Sustainable Engineering. Working in a diverse lab environment has made me acutely aware of the significant gap between theoretical AI and its practical deployment in energy and environmental systems. This realization was further reinforced when I participated in the ESCAPE 34 conference held in Florence this year, which sparked deeper insights into the challenges and opportunities of applying AI in sustainability. My current project, which addresses these issues, is also under review for ESCAPE 35.

My interest in sustainable engineering is also influenced by my family background. My father has worked in the energy sector, especially in coal, which exposed me to the field from an early age. However, unlike my father, I am more focused on clean energy and low-carbon development. I am driven by a vision of leveraging advanced AI technologies to bring tangible improvements to future energy systems, contributing to a sustainable environment.

At the same time, climate issues have become a critical area of research in energy, environmental, and sustainable engineering. Many countries and regions have set ambitious targets to address these issues, such as the goal of achieving "net zero" emissions by 2050 or 2060. This global commitment to sustainability presents an inspiring opportunity for lifelong research. The long-term nature of these goals aligns perfectly with my desire to contribute continuously to this field, helping to create a resilient and sustainable future through technological innovation. And that's the reason leads me to work on a new project currently, AI for wild fire and extreme weather prediction, under the supervision of the Prof. Qiuhua Huang in Colorado Mines.

Attention is All I Need
-Motivations

Before I started this project, I was struggling with the lingering emotions of a breakup, and loneliness felt like a daunting shadow. To add to that, my lab wasn't in the lively city of Lausanne but in a quiet, almost solitary town called Sion, where I was the only Master's researcher. On my first day, my supervisor joked, "You probably would never have come to this particular town if it weren't for this project."

However, as I dived into the work, everything started to change. I began to enjoy the process of discovering new methods, architectures, and neural networks, looking for ways to incorporate them into my research. My supervisor granted me the freedom to explore the field as I pleased. Even though most experiments didn't yield perfect results, the feedback I received from my explorations was incredibly encouraging even though most of them are negative. I often worked until the midnight to modify the codes, and the security had got familiar with me after a few weeks. Such a research experience activates me that the loneliness in research is not a problem for me, in fact, the excitement of exploring keeps me motivated and energized with Attention on Research is all I need.