

Form

ZHAO Chao

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To

Dr.Daphne Tuncer and Dr.Georgios Bouloukakis

Subject: Application for DigiEV Digital Twin Internship Position

Dear Professors,

My name is ZHAO Chao, a final-year student at ISEP with a background combining construction engineering, computer science, and data science. I am writing to express my strong interest in the 6-month DigiEV internship position. After carefully studying the three core project tasks, I believe my qualifications align perfectly with the role for the following three reasons.

- 1- **My background uniquely matches the internship requirements.** At Haituo, I implemented several digital twin models (Honeywell Platform) to monitor and control energy consumption, HVAC system, and data center. I also contributed two company-level guidelines and authored two internal research papers. At ISEP, I gained experience in Python, RESTful APIs, cloud platforms (AWS/Azure), and machine/deep learning frameworks (PyTorch, TensorFlow), alongside Knowledge of Semantic Web (RDF, Ontology). Furthermore, my international experience across both Haituo and ISEP has developed my ability to collaborate effectively within diverse, cross-functional teams.
- 2- **My passion for research and curiosity about the world drive me to seek deeper understanding.** I left my previous career to pursue a master's degree because I wanted to understand not only 'what' technical solutions exist, and 'how' to implement them, but also the 'why' behind their design. The DigiEV project's ambition to model EV charging infrastructure as a dynamic ecosystem of energy, data, and human interaction is precisely the type of 'why'-focused challenge that ignites my intellectual curiosity.
- 3- **This internship aligns with my long-term career goals.** As I plan to pursue a Ph.D. in the intersection of engineering and computer science, this project offers an ideal foundation for exploring digital solutions to real-world energy challenges. The opportunity to work under the joint supervision of ENPC and Telecom SudParis would provide unparalleled exposure to cutting-edge methodologies and interdisciplinary collaboration—key elements for my future academic journey.

Thank you for considering my application. I look forward to the opportunity to contribute to this innovative project addressing the crucial challenges of electric vehicle infrastructure development.

Sincerely,

ZHAO Chao