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Admission Committee
Vrije Universiteit Amsterdam (VU)
Department of Computer Science

February 21, 2025

Dear Members of the Admissions Committee,

I am writing to express my strong interest in the PhD position in Advancing Explainable AI for Knowledge Extraction at your esteemed institute. With a Master's degree in Computational Mathematics, extensive hands-on expertise in AI-driven medical image analysis, and a deep passion for Artificial Intelligence, I am eager to contribute to your research program.

During my Master's studies (2019-2022), I specialized in Generative Adversarial Networks (GANs) with a focus on style transfer learning for personalized Chinese handwritten characters. This project not only sharpened my technical skills but also deepened my proficiency in applying innovative computational methods—capabilities that will be directly beneficial to your group's research in state-of-the-art deep learning.

As a research assistant at Sun Yat-sen University's Computational Medical Imaging Lab, I led two interdisciplinary projects that integrated deep learning with clinical diagnostics. I developed a multi-task learning model to classify the severity of Placenta Accreta Spectrum Disorder using T2-weighted MRI images, achieving an AUC of 0.80. Additionally, I designed a CNN-based system to predict breast cancer metastasis in Sentinel Lymph Nodes via dual-energy CT scans, attaining an AUC of 0.85 in cross-validation. These experiences enhanced my proficiency in medical image analysis, deep learning, scholarly review, manuscript preparation, and interdisciplinary collaboration.

I am particularly drawn to your program's focus on the knowledge extraction and inference, which aligns perfectly with my aspiration to advance methodologies reliant on large language models (LLMs). During my PhD, I intend to: (1) Stay abreast of and integrate the latest advancements in large language models (e.g., GPT); (2) Enhance the accuracy and interpretability of inference models; (3) Validate these models in real-world settings through collaboration with project partners; (4) Publish my findings in leading AI/ML conferences and journals.

A PhD at the KAI and L&R group represents an ideal environment for me to further my academic goals and contribute to enhancing the extraction and inference capabilities of AI systems. In the long term, I aspire to lead research in explainable NLP models and large language models, and I am excited by the opportunity to work with a diverse team of researchers.

Thank you for considering my application. I look forward to the opportunity to discuss how my background and research interests align with your strategic objectives.

Sincerely,

Hai Jiang