

PhD Project

Generative AI for Digital Marketing

Supervisor: Dr. Yongmin Li (yongmin.li@brunel.ac.uk)

This is an interdisciplinary project between computing and business management, and is aimed to address challenges and opportunities in the rapidly evolving landscape of digital marketing, and apply the modern artificial intelligence (AI) technologies, in particular generative AI, to enhance and optimise various aspects of digital marketing strategies and practices.

Project Description

In the domain of digital marketing, the integration of Generative AI presents an opportunity to enhance customer engagement, personalise marketing strategies, and optimise decision-making processes. By utilising Generative AI technologies, businesses can create tailored content, automate marketing tasks, and derive insights from datasets to drive more effective marketing campaigns. This project aims to explore the impact of incorporating Generative AI into digital marketing practices, focusing on enhancing customer experiences, improving marketing efficiency, and staying competitive in the digital landscape.

The research may focus on one or more of the following aspects of text creation, image/graphics/video generation, and enhancing customer interactions. You will have opportunities to gain experience with the industry-demanding Generative AI technologies including Generative Adversarial Network (GAN), Diffusion Model (DM), Large Language Model (LLM), Large Vision Model (LVM), and Multimodal Model.

Environment and Support

The Department of Computer Science enjoys a strong international standing for its research in both data science and artificial intelligence, as evidenced by numerous research performance metrics, e.g., 3rd in UK overall and 85th in the world (the NTU Performance Ranking of Scientific Papers, Subject: Computer Science, 2022). Data Science and artificial Intelligence has been a strategic focus of the Department for both research and teaching. The proposed research sits right in the centre of the above focus area, and covers promising topics of intelligent data analysis, cloud computing, expert systems and natural language processing.

Eligibility

Applicants will be required to demonstrate that they have the following qualification, knowledge and skills:

- An Undergraduate First Class or Upper-Second Honours degree in computing, engineering, or other STEM subjects.
- A Postgraduate degree is not required but may be an advantage.
- Strong programming skills, ideally in Python, but other languages also acceptable.
- Good knowledge in expert systems, natural language processing and artificial intelligence.
- Highly motivated to learn.
- Able to work independently as well as collaborating with others in a team.