



PhD Studentship: Generative Modelling in Computer Vision

University of Southampton - School of Electronics and Computer Science (ECS)

Qualification Type:	PhD	Placed On:	24th October 2023
Location:	Southampton	Closes:	31st August 2024
Funding for:	UK Students		
Funding amount:	Tuition Fees and a stipend of £18,622 tax-free per annum for up to 3.5 years		
Hours:	Full Time		
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Project title: Generative Modelling in Computer Vision

Supervisory Team: Asst. Prof. Dr. Zhiwu Huang, Dr. Prof. Jonathon Hare, and Dr. Asst. Prof. Xiaohao Cai

Project description

The landscape of generative modelling in computer vision has undergone a remarkable transformation, evolving from conventional vision-based techniques to sophisticated **language-vision models**. This evolution has been propelled by the fusion of natural language understanding and image generation within computer vision systems, leading to ground-breaking research and practical applications like those using DALL-E3 with ChatGPT. This integration enables machines not only to interpret visual data but also to generate contextually rich, human-like descriptions, blurring the lines between artificial intelligence and human cognition. Furthermore, this shift has given rise to versatile generalist models, capable of handling diverse tasks, necessitating innovative solutions to seamlessly integrate language and vision. This PhD project aims to level up the current generative modelling techniques in computer vision, addressing challenges related to language-vision integration and the transition from specialized task-oriented approaches to adaptable generalist models. In other words, the research aims at **unlocking the potential of generative models that combine expertise and versatility through language-vision integration**.

The Vision, Learning, and Control (VLC) group at the School of Electronics and Computer Science (ECS), University of Southampton, is opening two PhD positions. We cordially invite individuals who are passionate to the realms of computer vision and machine learning to apply for these positions. The successful candidates will be engaged into the cutting-edge research within the supportive and collaborative environment of the VLC group.

If you wish to discuss any details of the project informally, please contact Asst. Prof. Dr. Zhiwu Huang, VLC Research Group, Email: Zhiwu.Huang@soton.ac.uk.

Entry Requirements

A very good undergraduate degree (at least a UK 2:1 honours degree, or its international equivalent).

Closing date: applications should be received no later than 31 August 2024 for standard admissions, but later applications may be considered depending on the funds remaining in place.

Funding: For UK students, Tuition Fees and a stipend of £18,622 tax-free per annum for up to 3.5 years.

How To Apply

Apply online: [Search for a Postgraduate Programme of Study \(soton.ac.uk\)](#). Select programme type (Research), 2024/25, Faculty of Physical Sciences and Engineering, next page select “PhD Computer Science (Full time)”. In Section 2 of the application form you should insert the name of the supervisor **Zhiwu Huang**

Applications should include:

Research Proposal

Curriculum Vitae

Two reference letters

Degree Transcripts/Certificates to date

For further information please contact: feps-pgr-apply@soton.ac.uk

The School of Electronics & Computer Science is committed to promoting equality, diversity inclusivity as demonstrated by our Athena SWAN award. We welcome all applicants regardless of their gender, ethnicity, disability, sexual orientation or age, and will give full consideration to applicants seeking flexible working patterns and those who have taken a career break. The University has a generous maternity policy, onsite childcare facilities, and offers a range of benefits to help ensure employees’ well-being and work-life balance. The University of Southampton is committed to sustainability and has been awarded the Platinum EcoAward.

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