

PhD in Computer Science

AI, Multimedia, Computer Vision, NLP, Health Informatics

We are looking for excellent candidates for 3 funded PhD positions at [VIREO, Computer Science Department, City University of Hong Kong](#). The students are expected to start PhD by September 2018. The researches, to be undertaken by the students, include (but not limited to):

Food recognition, portion size and nutrition estimation: While dietary habit is linked to metabolism, most people do not know what they have eaten and what should be eaten. Promoting healthy eating requires tracking of personal lifestyle data, which are more accessible now due to prevalence of computing sensors. The existing food logging methods, nevertheless, still depend heavily on user incentives to manually provide accurate information for doctor inspection. This project aims to minimize the food logging effort, through deep learning technologies to recognize food and quantify nutrition consumption, in way to encourage willingness in using high-tech for awareness of food consumption and the potential impact to health in long term.

Video hyperlinking: Investigation of techniques for “linking things inside multimedia archive” with the aim of enabling video content more easily accessible and consumable. The main topics to investigate are: 1) algorithms for mining significant objects (who, what, where), 2) theories and practices in the selection of sources (link anchors) and destinations (link targets) for hyperlinking video fragments.

Cross-modal search by deep learning: Investigation of deep architectures and learning strategies for cross-modal retrieval. The target applications are known-item search, question-answering, video domain relationship mining.

The doctoral students will be supervised by Prof. [Chong-Wah Ngo](#). The students will have access to the computing resources provided by VIREO at Hong Kong and CityU Shenzhen Research Institute at China.

VIREO, established since year 2003, is active in the area of multimedia computing by contributing various open sources and datasets to the research communities. The laboratory has GPU servers and distributed computing infrastructure for indexing and searching of large-scale video dataset. VIREO has 6 to 12 members yearly, including PhD students, research assistants and postdocs. The graduates/students have won best paper awards including in ACM Multimedia and IEEE Trans. on Multimedia, and various honors including ACM SIGMM Rising Star Award, ACM China Rising Star Award and ACM SIGMM Outstanding PhD Thesis.

Required qualifications

1. MSc or BSc in a field related to one of the following: computer science, electrical engineering, artificial intelligence, applied mathematics.
2. Some knowledge in multimedia computing, machine learning, information retrieval or natural language processing.
3. Strong programming skills.
4. Ability to communicate and report research results in English.

Studentship

PhD students will receive a monthly stipend of USD \$2,000 to USD \$2,600, depending on qualification and academic performance. The duration of PhD is 3 years (extendable to 4 years).

Application

To apply, please send your application package (CV, publication record, academic transcripts, research statement / motivation letter) to Prof. Chong-Wah Ngo cscwngo@cityu.edu.hk **before November 20th 2017**. For more information about this position, please contact Prof. CW Ngo.

Link to Department of Computer Science: <http://www.cs.cityu.edu.hk/>

Link to VIREO: <http://vireo.cs.cityu.edu.hk/>