# Computer Science GTA Project

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**Section 2 – *Project Information***

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| **Project Title** | Development of Comprehensive Visual Understanding Model |
| **Project Highlights:** | 1. | Computer Vision |
| 2. | Machine Learning |
| 3. | Data Association |
| **Project Summary**  |
| The recent advancement of large AI models has yielded remarkable achievements in various tasks, including natural language processing with successful models like ChatGPT. However, a significant capability gap remains between human and large AI models in vision tasks. One reason for this substantial disparity stems primarily from the challenge of effectively associating diverse visual understandings from different perspectives, resulting in a limited ability to understand the real world comprehensively. In this project, we aim to address this challenge by exploring the learning of data association, which is essential to build competent AI models that approach human capacity in vision tasks. The project includes knowledges and explorations on computer vision, machine learning, and data association.The student will be supervised by Dr. Jiayan Qiu (<https://sites.google.com/view/jiayanqiu>), who is currently a Lecture at University of Leicester, College of Computing and Mathematical Science. Before that, he was a postdoc research fellow in theDepartment of Electrical & Computer Engineering, University of Waterloo. He received his Ph.D. from the University of Sydney (USYD). Prior to that, he obtained both his MPhil and honorable B.S. degrees from the Australian National University (ANU). His research interests including computer vision, machine learning, and artificial intelligence, which outcomes are published on the top AI venues, such as IEEE T-PAMI, CVPR, ECCV, ICML, and ACM KDD. |