# Zhong Xuan **Khwa**

(+65) 9696 3373 | zhongxuan@u.yale-nus.edu.sg | zhongxuank | zhongxuan95

## Education

**Yale-NUS College**                                                                                                     *Singapore*

Bachelor of Science, with Honours                                                                          *Jul. 2016 - May 2020*

- Majored in Mathematical, Computational & Statistical Sciences.
- Attained a Cumulative Average Point of 4.68 / 5.00.
- Awarded the Global Leader Scholarship in recognition of success in academics, extracurricular involvement, and leadership.
- Bachelor's Thesis on *Linear Algebraic Techniques for Spanning Tree Enumeration* (in progress), with Professor Matthew T. Stamps.

## Research Experience

**Yale-NUS College (Research Project on Computational Geometriy and Animal Behaviour)**          *Singapore*

Research Team Lead                                                                                            *Starting in Jan. 2020*

- Will begin leading a team of 6 Research Assistants on a project on "Computational Geometric Techniques for Modelling Inherent Variability in Animal Behavior", working with Professor Matthew Stamps and Professor Ajay Mathuru.

**CopeNLU, University of Copenhagen**                                                            *Copenhagen, Denmark*

Research Intern                                                                                                 *May 2019 - Jul. 2019*

- Worked on exploratory project investigating *Zero-shot Relation Extraction with Graph Neural Networks*, with Professor Isabelle Augenstein, Sel-van Raghavendra, and Johannes Bjerva.
- Developed and applied method for linking entities in existing zero-shot relation extraction dataset (Levy et al. 2018) to WikiData entries.
- Implemented a Graph Neural Network initialized with BERT embeddings of sentences (for edges) and node labels to predict unseen relations in a zero-shot setting.

## Teaching Experience

**Yale-NUS College Peer Tutor Program**                                                                     *Singapore*

Peer Tutor (Quantitative Reasoning, Proof, Probability and Statistics)                                *Aug. 2017 - Apr. 2019*

- Taught and led over 100 hours of individual and group peer tutoring sessions.
- Communicated difficult mathematical concepts effectively to students from diverse academic backgrounds.

## Leadership Experience

**Yale-NUS College Residential College Advisor Program**                                                    *Singapore*

Residential College Advisor                                                                                   *May 2019 - Present*

- Provided extensive support for international group of first-year students through academic issues, personal wellness, and crisis situations.
- Trained in conflict management and mediation, facilitating productive dialogue in diverse groups, and identity-based intersectional support.

**Residential Housing, Yale-NUS College Dean of Student's Office**                                           *Singapore*

Student Associate                                                                                             *Aug. 2019 - Present*

- Researched and prototyped automated method for allocating housing for first-year students and exchange students, who make up 30% of total annual enrollment.
- Developed Python package for housing allocation which integrates into existing work-flow.

**Yale-NUS Ballroom Society**                                                                                 *Singapore*

Captain / Advanced Training Director                                                                  *January 2019 - November 2019*

- Led the biggest active student organization in Yale-NUS College, with 67 members.
- Awarded "Best Student Organization" in the Kingfisher Awards 2019, an award ceremony organized by Yale-NUS College's Dean of Student's Office to recognise excellence in student organisations.
- Designed and executed training programs for both first-year dancers as well as advanced dancers.

## Skills

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| **Programming** | Proficient: Python, R, LaTeX.  Familiar: OCaml, Elixir, Octave. |
| **ML / AI** | PyTorch, Deep Graph Library, Stanford CoreNLP. |
| **Relevant Tools** | Git, SQL, Google Cloud Platform. |
| **Languages** | English (Native), Chinese (Conversational). |