

# SIU LUN CHAU

## Ph.D Student in Statistical Machine Learning

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### EDUCATION

#### DPHil in Statistical Machine Learning

University of Oxford

2019 - Ongoing

- Supervised by Prof. Dino Sejdinovic, Prof. Mihai Cucuringu and Prof. Xiaowen Dong.
- Thesis title: Explainability, Causality, and Uncertainty via Kernel methods.

#### MMATH in Mathematics and Statistics (1st Class Honours)

University of Oxford

2017 - 2018

- Ranked 2nd in the year.
- Distinction in Master Thesis: Modelling Diseases Trajectories with Infinite Mixture of Gaussian Processes.

#### BA in Mathematics and Statistics (1st Class Honours)

University of Oxford

2014 - 2017

- Ranked 1st in the year.
- Distinction in Undergraduate Essay: Adaptive and Gradient Boosting in Machine Learning.

### PUBLICATIONS

#### RKHS-SHAP: Shapley Values for Kernel Methods

The 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022) | Under Review

Siu Lun Chau, Javier Gonzalez and Dino Sejdinovic

2021 https://arxiv.org/pdf/2110.09167.pdf

#### Learning Inconsistent Preference with Gaussian Processes

The 25th International Conference on Artificial Intelligence and Statistics (AISTATS 2022) | Under Review

Siu Lun Chau, Javier Gonzalez and Dino Sejdinovic

2021 https://arxiv.org/pdf/2006.03847.pdf

#### BayesIMP: Uncertainty Quantification for Causal Data Fusion

Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS 2021)

Siu Lun Chau, Jean Francois Ton, Yee Whye Teh, Javier Gonzalez and Dino Sejdinovic

2021 https://bit.ly/3F6ZoRp

#### Deconditional Downscaling with Gaussian Processes

Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS 2021)

Siu Lun Chau, Shahine Bouabid and Dino Sejdinovic

2021 https://bit.ly/3e2eVGh

#### Kernel-Based Graph Learning From Smooth Signals: A Functional Viewpoint

Transactions on Signal and Information Processing over Networks (IEEE)

Xingyue Pu, Siu Lun Chau, Xiaowen Dong and Dino Sejdinovic

2020 https://ieeexplore.ieee.org/document/9356326

### LANGUAGES

English Proficient ●●●●● Mandarin Native ●●●●●  
Cantonese Native ●●●●●

### SKILLS

#### Machine Learning Models

Kernel Methods

Gaussian Processes

Graph Neural Networks

#### Machine Learning Application

Causal Inference

Preference Learning

Explainable AI

Uncertainty modelling

Bayesian Optimisation

Graph ML

#### Software

Python

R

Pytorch

Scikit-Learn

### EXPERIENCES

#### Machine Learning Research Intern

Max Planck Institute for Intelligence Systems

2021 - Ongoing Tübingen, Germany

- Supervised by Dr. Krikamol Muandet.
- Researched into relaxing restrictive structural assumptions in causal Inference under unobserved confounding and decision making.

#### Machine Learning Content Developer

Cambridge Spark

2017 - Ongoing London, United Kingdom

- Designed projects and delivered Machine Learning courses to upskill students and corporate.

#### Machine Learning Engineer

Gini

2020 - 01/2021 Hong Kong

- Developed a Gaussian Processes based explainable time series model for giniPredict, a forecasting tool built for use in Google spreadsheets for decision-makers.

#### Machine Learning Consultant

CatalystAi

2019 - 2020 Cambridge, United Kingdom

- Developed a crop growth forecasting model using Gaussian Processes for Crop4Sight, an agricultural software company.
- Developed a demand forecasting model for a markdown optimisation project for a fashion retail company.

#### Founder and Managing Director

Oxford Strategy Group Digital

2017 - 2019 Oxford, United Kingdom

- Launched and managed Oxford's first student-led machine learning consultancy group with over 50 technical consultants.