RYAN CHAN

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EXPERIENCE

Cambridge Spark - Teaching Fellow March 2021 - Present

· Developing course materials for students enrolled in Cambridge Spark's *Data Essentials* program providing an introduction to statistics and data analytics

University of Warwick - Teaching Assistant July 2020

· Developed an R course (*Basic R with pointers*) for Mathematics and Statistics students
· Course covered basic programming with R, visualisation with ggplot2 and building packages in R

EDUCATION

The Alan Turing Institute / University of Warwick September 2018 - Present
PhD Statistics

· University of Warwick has one of the top statistics research groups in the UK. PhD in partnership with The Office of National Statistics (ONS) and The Alan Turing Institute which is the national institute for data science and artificial intelligence
· Working on Bayesian analysis for Big Data and developing Monte Carlo methodology for unifying distributed analysis with applications in cryptography and privacy with Prof. Gareth Roberts, Dr. Murray Pollock and Prof. Petros Dellaportas
· Organiser of the student seminar series at The Alan Turing Institute
· Publications:

- Chan, R. and Dai, H. 2020. Discussion of "Quasi-stationary Monte Carlo and the ScaLE algorithm" by Pollock, Fearnhead, Johanson and Roberts, JRSS B.

University of Leeds September 2014 - July 2018
MMath, BSc Mathematics - 1st Class Honours (87%)

· Focused on Bayesian statistics, statistical computing and algorithms, stochastic processes, statistical modelling
· Good knowledge of statistics/machine learning models and algorithms: predictive modelling, deep learning, recommender systems, topic modelling
· Undertook two undergraduate summer research projects; one with Dr. Kevin Houston on the Laplace-Beltrami operator and another with Dr. Jonathan Ward on 'adaptive networks'
· Elected by the Mathematical Society to be treasurer and secretary for the 2017/2018 academic year

PROJECTS

Recommendation Systems for Podcast Discovery (ATI Data Study Group) April 2021

· Participated in a project with Entale to develop podcast recommendation systems
· Built a topic model to recommend new podcasts based on the similarity to the topics that have been of interest to a listener previously
· Explored the use of collaborative-filtering recommendation techniques that recommends new podcasts based on podcasts that have been of interest to users with similar listening history or show subscriptions
· Gained experience with Natural Language Processing, collaborative filtering, text mining, clustering algorithms, dimension reduction techniques and recommender systems using Python

Bayesian Sports Modelling July 2017 - May 2018

- Investigated the applicability of Bayesian hierarchical models for predicting the outcome of football matches
- Developed models that achieved a greater prediction accuracy than existing models in the literature
- Used R and Stan to implement various models

Automatic Puzzle Solving September 2016 - May 2017

- Investigated the logic of Sudoku puzzles and studied search algorithms to solve and generate Sudoku puzzles
- Designed and implemented a search algorithm that was able to solve all square Sudoku puzzles

AWARDS AND SCHOLARSHIPS

- The Alan Turing Institute Doctoral Studentship (2018-2022)
- The Royal Statistical Society Prize (2018)
- Three time recipient of the "Top 10 scholarship" awarded to the top 10 undergraduates each year at the University of Leeds (2015, 2016, 2017)
- Two time recipient of the "Summer Vacation Bursary Scheme" to undertake a research project at the University of Leeds (2016, 2017)

SKILLS

Programming	R Statistical (including Rcpp), Python, Julia, C++, Stan, HTML, CSS
Other	Experience with parallel HPC and Cloud Computing with Microsoft Azure Experience with Unix/Linux OS environments SQL, Git
Languages	English, Cantonese
Interests	Film, Football, Basketball, Sports Analytics, Podcasts, Cycling

References available on request