YIRAN WANG

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EDUCATION

University of Waterloo   Waterloo, ON, Canada
Ph.D. in Statistics   Sept. 2019 - Jun. 2023(*expected*)
Supervisor: Audrey Béliveau

University of California, Irvine   Irvine, CA, USA
Master of Science in Statistics   Sept. 2017 - Jun. 2019

Donghua University   Shanghai, China
Bachelor of Science in Statistics   Sept. 2013 - Jun. 2017

University of California, Los Angeles   Los Angeles, CA, USA
Summer Session   Aug. 2016 - Sep. 2016

RESEARCH EXPERIENCE & PROJECTS

Genetic Mark-Recapture Methods for Estimating Run Size   May 2020 - Present
Supervisor: Audrey Béliveau

· Analyzed the stock population with genetic information of a certain type of salmon.
· Estimated the total run size using genetic mark-recapture methods.
· Proposed a new Bayesian integrated model for population estimation.

Retest Effect Analysis on Diagnosis of Alzheimer's Disease   Jun. 2018
Qualifying Exam Data Analysis Project

· Analyzed the retest effect in three neuropsychological tests for 15,665 patients in three Alzheimer's disease diagnosis types (normal, MCI and AD).
· Estimated the trajectory of neuropsychological performance measures as a function of patient diagnosis type using generalized estimating equation (GEE) models.
· Quantified the retest effect over time and adjusted test scores to eliminate the retest effect.

Principal Geodesic Analysis for Imaging Data   May 2018
Adviser: Zhaoxia Yu (Professor)

· Read papers about principal geodesic analysis (PGA), which is a generalization of PCA to a non-Euclidean, non-linear setting of manifolds.
· Used PGA to perform dimension reduction on high-dimensional fMRI readings over 372 regions of interests from 209 healthy college students.

TEACHING EXPERIENCE

Department of Statistics and Actuarial Science, University of Waterloo   Sep. 2019 - Present
Teaching Assistant

· Held regular office hour, proctored tests, marked assignments and tests for:
STAT 202 Introductory Statistics for Scientists (Fall 2019)
STAT 230 Probability (Winter 2020, Spring 2020)
STAT 331 Applied Linear Models (Spring 2020)

STAT 371 Applied Linear Models and Process Improvement for Business (Fall 2019, Fall 2020)

Department of Statistics, UC Irvine   Apr. 2018 - Mar. 2019
Teaching Assistant

· Held regular office hour, conducted weekly discussion sections, graded homework and examinations for:
STATS 7 Basic Statistics
STATS 67 Introduction to Probability and Statistics for Computer Science

AWARDS AND FELLOWSHIP

Waterloo Special Graduate Student Entrance Award	*Sep. 2019*
Donghua University Outstanding Graduate	*Jun. 2017*
Donghua University Merit Scholarship	*Dec. 2016*
Donghua University Tianji Scholarship	*Dec. 2016*
Donghua University Social work Excellence Scholarship	*Dec. 2015, Dec. 2016*
Donghua University Outstanding Student Leader	*Dec. 2015, Dec. 2016*
1$^{\text{st}}$ Prize in Donghua University Mathematical Modelling Contest	*Jun. 2015*