

OSCAR WU

Recent graduate of Master of Data Science with strong applied mathematics skills and Future PhD Student in Deakin University.



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EDUCATION

M. Sc. Data Science

02/2020-03/2022

Deakin University, Melbourne, Australia

- Achieved: HD average (83.75)
- SIT742 – Modern Data: Hall of Fame (Top student in this unit and presented coding skills to other master students)
- Completed two-trimester [Deakin Industry Student Capstone](#) (Top 3 projects).
- 2022 International Student Representative in School of Information Technology Promotion Project

B. Sc Mathematics and Applied Mathematics

09/2014-06/2019

Chongqing Technology and Business University, Chongqing, China

- Achieved: GPA 72.50

RESEARCH EXPERIENCE

Minor thesis - HD 93

11/2020-03/2022

The Interpretability of SHAP value and LIME on COVID-19 Fake News Detection

- Created a multilingual COVID-19 fake news dataset and analyzed news features, such as COVID-19 news keywords and the distribution of languages used.
- Built up a decision support system as a warning mechanism for COVID-19 fake news via computational-based machine learning.
- Improved public trust in machine learning methods for COVID-19 fake news detection.

Research Fellow

11/2021-present

[A/Prof. Xiao Liu](#) and [A/Prof. JianXin Li](#), Deakin University

[Multilingual COVID-19 Fake News Detection and Intervention](#), collaborating with Gadjah Mada University, sponsored by [Study Melbourne Partnership](#)

- Collected and constructed Multi-lingual fact-checking COVID-19 fake news datasets. The dataset has included: 245 fact-checking organisations, 25,700 records, 24,172 claims and 52 languages, etc.
- Developed project websites and built a web portal of fact-checking service to debunk COVID-19 misinformation.
- Conducted theoretical analysis of the existing fake news detection models, and design a multilingual COVID-19 fake news detection model using advanced machine learning techniques
- Collaborating with two papers in the project on the topic of fake news (Publication under review)

Casual Research Assistant

04/2021-12/2021

[Professor Gleb Beliakov](#), Deakin University

Multi-Objective Optimization Problems

- Preparing numerous test problems by python: Function Objectives, Function constraints, Variable domain.
- Preparing EA algorithms by python, such as NSGA II.
- Testing algorithms on problems from the test problem list to modify and extend variable dimensions. Visualizing results: objective space, Pareto-front, nadir point etc. Employing IGD+ and Hypervolume to analyse result files.
- Building machine language pipeline. Multi-objective optimization problems calculated in Python environment, created by bash scripts and evaluated by combined C++ and Python.

Casual Research Assistant

03/2021- 11/2021

[A/Prof. Gang Li](#), Deakin University

[Member of Team For Universal Learning and Intelligent Processing \(TULIP\)](#)

- Studied machine learning knowledge and skills including linear algebra, pattern classification, NLP.
- Studied factorisation machines, reported the progress of paper reading and presented machine learning projects on a weekly basis.
- Implemented tensor decomposition on a factorization machine to map calculation into low dimension space along with features interaction.

PROJECT EXPERIENCE

Junior Data Analyst

03/2021- 06/2021

D2I Melbourne City, Capstone Project Sponsored by Deakin University

Pedestrian Count Project

- Forecasted pedestrians count using Melbourne station sensor.
- Ran ML model as the benchmark and compared with LSTM. Implemented flask to build a project portal and Tableau for visualization.

Senior Data Analyst

06/2021- 10/2021

[Open Data Playground](#), Capstone Project Sponsored by Deakin University

- the First developer to analyze the City Of Melbourne (COM) open data portal's meta-data. The researcher re-crawled and pre-processed 223 datasets.
- the First author of [Open data API](#) (a command-line Python program for open data retrieval) to help customers easily access and use data from COM.
- Presented at the Deakin Capstone Projects Expo as the top project.
- Presented the promotional video of the Deakin School of Information Technology Promotion Project.

REFEREES

Prof. Gleb Beliakov

Faculty of Sci Eng & Built Env
School of Information Technology
Deakin University

A/Prof. [Daniel Ma](#)

School of Computer Science
Fudan University

Contact details is available upon request.