

# CURRICULUM VITAE – HONG-BIN LIU

---

## PERSONAL INFORMATION

Dr Hong-Bin LIU  
♂ Male  
📅 19/06/1986  
👤 Australian PR  
🌐 <https://hongbin.info>  
✉ [me@hongbin.info](mailto:me@hongbin.info)  
☎ +61423952572

## SKILLS

**Programming languages:** Python, Objective C, Java, Swift, C#, PHP, MySQL.  
**Deep Learning and Data Mining:** Tensorflow, PyTorch, Numpy, R, OriginPro.  
**Office softwares:** Microsoft Office, LaTeX.  
**Languages:** English, Chinese (Mandarin and Cantonese).

## EDUCATION

**Ph.D in Information Systems** - Artificial Intelligence  
James Cook University (JCU), QLD, Australia

**Supervisor:** Ickjai Lee, Joanne Lee, Trina Myers

**Project Summary:** Looking at applying AI technologies into spatio-temporal datasets, including trajectory classification, sequence prediction etc.

**Outcomes:** During my Ph.D study, I have gained sufficient research skills, including literature review, experiment implementation and academic writing. I have written three high quality conference papers including ICDM (Core Rank A\*) paper and ECAI (Core Rank A) and two journal papers (in review). I also built up research collaboration network, we have collaboration on one paper with Fudan university which is one of the top universities in Asia. During my Ph.D period I also won the 3rd place of the AI Challenger 2018 weather prediction competition.

**Master of Computer Science**

2010 - 2012

Royal Melbourne Institute of Technology (RMIT), Melbourne, Australia

## PUBLICATIONS

**Hong-Bin Liu**, Ickjai Lee, "Bridging the Gap Between Training and Inference for Spatio-Temporal Forecasting", ECAI 2020 Accepted (Core Rank A)

**Hong-Bin Liu**, Hao Wu, Weiwei Sun, Ickjai Lee, "Spatio-Temporal GRU for Trajectory Classification", 2019 IEEE International Conference on Data Mining (ICDM), Beijing, China, 2019, pp. 1228-1233. (Core Rank A\*)

**Hong-Bin Liu**, Ickjai Lee, "MPL-GAN: Towards Realistic Meteorological Predictive Learning Using Conditional GAN", IEEE Access, doi: 10.1109/ACCESS.2020.2995187. IF=4.098

**Hong-Bin Liu**, Ickjai Lee, "Irregular-sampled Trajectory Modelling with Spatio-Temporal GRU", TIST in Review

**Hongbin Liu** and Ickjai Lee, "End-to-end Trajectory Transportation Mode Classification using Bi-LSTM Recurrent Neural Network" 2017 12th International Conference on Intelligent Systems and Knowledge Engineering (ISKE), Nanjing, 2017. (Core Rank B)

## EMPLOYMENT HISTORY

**James Cook University - Casual Academic**

Cairns, QLD. 2019 -

- Tutor for MA5852 Data Science Master Class 2 (Tutorial delivery)
- Tutor for MA5832 Data Mining and Machine Learning (Tutorial delivery)
- Tutor for MA5810 Introduction to Data Mining (Tutorial delivery)
- Tutor for CP5805 Python Programming (Tutorial delivery)

- Tutor for CP5804 Database Modelling (Assessment Marking)
- Tutor for MA5800 R Programming (Assessment Marking)

#### **InspectionApps - Developer Programmer**

Cairns, QLD. *Dec. 2014 - Jul. 2017*

Duties:

- Develop and maintain Inspection iOS APPs and SAAS applications.
- Meet clients and gather requirement specifications
- Project management to achieve goals

Technologies:

- PHP, Objective-C, C#.net, MySQL, SQL, Javascript, AngularJS, HTML, CSS.

#### **Logicsolutions - iOS Developer**

Shanghai, China. *Jan. 2013 - Dec. 2014*

Development of varieties of mobile applications including iOS and Android platforms. Develop and maintain all sort of iOS applications.

Projects:

- |                                     |                       |
|-------------------------------------|-----------------------|
| • Showcase Sales iPad APP           | Jan. 2013 - Jun. 2013 |
| • Genisys @ Credit Union iPhone APP | Jun. 2013 - Sep. 2013 |
| • Hirambo APP.                      | Sep. 2013 - Dec 2013  |
| • Jebsen Porsche                    | Jan 2014 - Oct. 2014  |

#### **PROJECTS**

##### **Weather Forecasting Competition**

<https://challenger.ai/competition/wf2018>

AI Challenger is one of the world leading AI/Data Mining contest platforms. Weather Forecasting is to build a model that takes historical observed data and outputs the prediction of the next 24 hours. In this competition I adopt the encoder-decoder LSTM, the encoder encodes the historical data into a feature vector and the decoder outputs the prediction step by step based on the encoded feature vector.

##### **Bintorch**

<https://github.com/bingo619/bintorch>

This is a replication of PyTorch by pure Python and Numpy that I built, which aims to help beginners to understand how deep learning frameworks work. This project has got many attentions from Deep Learning researchers all around the world.

##### **ReadPapers**

<https://github.com/bingo619/ReadPapers>

An awesome APP built for researchers to search and read open access publications.

##### **Air Presentation**

<https://itunes.apple.com/au/app/air-presentation-ppt-remote/id1294122699>

A PPT remote includes iOS APP, Apple Watch APP and Mac service. I designed and implemented all platforms including all the graphic designs.

#### **AWARDS**

##### **Weather Forecasting Competition**

Won 3rd place.

##### **Australia APA Scholarship**

2017 - 2020

#### **PUBLIC SERVICES**

##### **TIST Journal Reviewer**

##### **ECAI 2020 PC Member**

##### **SmartGIFT 2019 PC Member**