

# HONGKAI HE

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## EDUCATION

### NEW YORK UNIVERSITY

*Master of Science in Applied Urban Science and Informatics*

New York, NY  
08/2017-08/2018

- Core Courses: Applied Data Science, Urban Decision Models, Civic Analytics and Intelligence, Principle for Urban Informatics
- Visa Status: F-1 Student Visa

### UNIVERSITY OF MELBOURNE

*Bachelor of Environments in Environmental Engineering Systems*

Melbourne, VIC  
07/2014-08/2017

- Core Courses: Calculus I&II, Linear Algebra, Engineering Computation, Engineering Mathematics, Engineering Risk Analysis

### SURREY INTERNATIONAL INSTITUTE, DONGBEI UNIVERSITY OF FINANCE AND ECONOMICS

*Bachelor of Management in Business Management*

Dalian, China  
09/2012-06/2014

- Relevant courses: Business and Economics Mathematics 1&2, Business and Economics Statistics,
- First Class Merit-based Scholarship Receiver (Once); Second Class Merit-based Scholarship Receiver (Twice).

## SKILLS

- Microsoft Office (Specialized in Excel and PowerPoint)
- C, Python, R, SQL
- Google Earth, ArcGIS

## PROFESSIONAL EXPERIENCE

### Hunan Datang Xianyi Technology CO., Ltd

*Big Data Research & Development Intern*

Changsha,  
China  
12/2016-02/2017

- Tested the functions of the X-BDP big data decision support platform developed lately by the company
- Used decision tree algorithm to process dataset of 2015 as training data and established a model which Predicted the monthly electricity consumption of 5 coastal provinces in China in 2017 to support the planning of electricity generation in 2017.
- Predict the possible failure of the turbine shafts and booster pumps for Zhuzhou Power Plant to support the scheduling of major overhaul events in the coming 5 years

### Civil System Design Capstone Project

*Data Analyst*

Melbourne, VIC  
07/2016-11/2016

- Designed a water supply system for a mining town in Northern Territory, Australia to transfer water from a reservoir to the town with minimal environmental impacts
- Performed a financial analysis for the engineering system to minimize the cost by analyzing data on population, pipeline parameters, pump arrangement, site preparation cost, etc.

### Environmental Engineering Research Project

*Data Analyst*

Melbourne, VIC  
07/2015-09/2015

- Built a model that can predict rainfall under on different climate scenarios in Emu Creek catchment
- Enhanced the model to predict daily water storage of the catchment in 2016 to assess the likelihood of failure of the water supply system for 4 surrounding towns
- Repeatedly refined the model to evaluate how well the prediction fit real-world situation

## LEADERSHIP & VOLUNTEER EXPERIENCES

### Mandarin Language Club

*Vice Director of Teaching Team*

Melbourne, VIC  
08/2016-05/2017

- Surveyed on students' Mandarin study needs and designed teaching syllabus of 2 terms accordingly
- Based on students' feedback, Designed practice sheet for each session and adjusted teaching methods

### Model United Nations Association

*Minister of Academic Department*

Dalian, China  
09/2013-06/2014

- Organizer and coordinator of the first Model United Nation Conference of Dongbei University of Finance and Economics
- Organized 3 MUN training sessions to improve other association members' conference-attending skills. Helped 46 members to successfully attend and win various prizes in many high-level MUN conferences held in universities like Peking University, Tsinghua University and others.