

# Zhenxiang Wang

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<https://zhenxiangwang.github.io/profile/>

## OBJECTIVE

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- A self-motivated, detail-oriented, reliable and dedicated developer.
- Seeking a software engineer position to utilize logical thinking skills and programming expertise to provide the company with excellent software solutions.
- Offering expertise in Web Design and Development, Software Development, Machine Learning, and Cloud Computing.

## PROFESSIONAL SKILLS

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- **Front-end:** React, JavaScript, ES6, HTML5, CSS3, Less, Bootstrap, jQuery, Responsive Web Design.
- **React:** SPA Development, React-Router-Dom, Redux, React-Redux, React-Thunk, React Hooks, React Lazy Loading, Loadable, Axios, Styled-Components, Ant Design, Material UI.
- **Back-end:** Nodejs, Express, Ajax, EJS, RESTful API, Java, Python.
- **Database:** SQL(MySQL), NoSQL(MongoDB/CouchDB), Cloud(AWS/Nectar).
- **Mobile Application Development:** Swift, Android, Wechat Mini-Program.
- **Machine Learning:** Natural Language Processing, Deep Learning, Reinforcement Learning, TensorFlow, Keras, Scikit-Learn, Numpy, NLTK, Matplotlib, Weka.
- **Others:** Git, Npm, Yarn, TDD, CI/CD, Heroku, WordPress, Agile, Scrum, SEO, Video Editing.

## SOFT SKILLS

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- **Languages:** Mandarin: Proficient; English: PTE (90), Diploma of Interpreting (Mandarin-English).
- **Mathematics and Statistics:** Strong background and proficiency in advanced Mathematics and Statistics.
- **Problem-Solving:** Solve problems with lateral thinking, logical reasoning and persistence.
- **Communication:** Communicate with clarity, respect, confidence, and friendliness.
- **Teamwork:** Engage in teamwork with active listening, collaboration and idea exchanging.

## WORK EXPERIENCES

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### Linghang

*Apr 2019 - Present*

#### *Web Developer*

In charge of the planning, design, update, upgrade, deploy and maintenance of three websites according to the company's changing needs.

- Designed and developed dynamic, responsive and interactive websites that ensure high traffic, page views, multi-device compatibility, and user experience, which increased user clicks, and subsequently customer purchases by 50%.
- Upgraded the website from front-end static display pages to a website with a back-end server.
- Designed and developed a background management system to manage user permissions, organize online courses, update learning materials and visualize user data.
- Search engine optimization, which increased the ranking of the website by more than 10.
- Websites: 1. <https://linghang.com.au/> 2. <https://iters.com.au/> 3. <http://www.monkeyking.com.au/>

## EDUCATION

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### The University of Melbourne

*Feb 2017 - Nov 2018*

#### *Master of Information Technology*

*Melbourne*

- **Grade:** H1
- **Honours:** First Class Honor

- **Curriculum:** Statistical Machine Learning, Web Search and Text Analysis, AI Planning for Autonomy, Cluster and Cloud Computing, Distributed Systems, Mobile Computing Systems Programming, Software Modelling and Design, Database Systems, Software Processes and Management, etc.

## Jinlin University

Sep 2012 - Jun 2016

### Bachelor of Finance

Changchun

- **GPA:** 3.46 / 4.0 (Top 5%)
- **Honours/Awards:** First-Class Scholarship, Advanced Individuals Scholarship.
- **Curriculum:** Mathematical Analysis, Advanced Algebra, Probability Theory, Mathematical Statistics, Mathematical Modelling, Applied Stochastic Processes, Applied Regression Analysis, Mathematical Economics, Econometrics, Financial Computation, etc.

## PROJECTS

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### Admin Management System

Sep 2019 - Present

#### Individual

A single page application of the admin management system, separating the front-end PC application and the back-end application.

- Implemented user management, product classification management, product management, authority management and other functional modules.
- Front-end: React + Redux + Antd + Axios + ES6 + Webpack and other technologies.
- Back-end: Node + Express + MongoDB and other technologies.
- Adopted modularization, componentization and engineering model development.
- Github: <https://github.com/ZhenxiangWang/AMS>

### Deep Reinforcement Learning Algorithms Analysis and Optimisation

Feb 2018 - Jun 2018

#### Team Leader

Comparing the leading value-based and policy-based deep reinforcement learning AI agents under various game circumstances to explore the reasons for the performance difference and combine them to do the algorithm optimization.

- Environment: 2D and 3D games on the OpenAI platform and the Microsoft Malmo platform.
- Tools: TensorFlow + Python + Numpy + Matplotlib.
- Value-based Algorithms: Deep Q-Network, Double DQN, Duling DQN, Prioritized Experience Replay.
- Policy-based Algorithm: Prioritized Experience Replay.
- Combination: Asynchronous Actor-Critic algorithm, which had the best performance of all the games.
- Github: <https://github.com/ZhenxiangWang/DeepMine>

### Instagram-like Social Media Mobile App

Sep 2018 - Dec 2018

#### Team Member

An IOS social media mobile application implemented in Swift, which had a similar function to Instagram. It supports:

- Taking photos and apply filter effects and share it.
- Building a micro-community based on these photos, where you can interact with other users through actions such as attention, comment, praise, etc.
- Github: <https://github.com/ZhenxiangWang/MobInstagram>
- Youtube: <https://youtu.be/V4kD2nAMP9U>

### My Blog

Jun 2019 - Aug 2019

#### Individual

A single page application of a personal blog website.

- Implemented user login, search, topic recommendation, writing articles and other functional modules.
- Front end: React + Redux + React Router + Immutable.js + Antd + Axios + ES6 and other technologies.
- Simple design to meet the needs of my writing technology blogs.
- Github: <https://github.com/ZhenxiangWang/BLOG>

## Sentiment Analysis of Social Media in Melbourne

May 2018 - Jul 2018

Team Member

Big data analysis of the sentiment data of Twitter users around Melbourne.

- Cloud: Nectar Cloud + Automatic Deployment: Ansible
- Preprocessing: crawled big real-time Twitter data in Melbourne in parallel and stored it in CouchDB in Nectar Cloud.
- Modelling: calculated Twitter's sentiment scores utilizing CNN + LSTM algorithms.
- Analysing: analysed relationships between sentiment scores and other regional data (proportion of drunken people, education level, per capita income, etc.)
- Visualization: implemented a real-time front-end website to visualize results.
- Github: <https://github.com/ZhenxiangWang/Cluster-Sentiment-Analysis>
- Youtube: <https://youtu.be/nlcv2GNyFpQ>

## Intelligent Question Answering System

Mar 2018 - May 2018

Team Leader

An intelligent question answering system, which can answer the most relevant answers when you input questions. The technical details are as follows:

- Implemented a problem classifier based on LSTM.
- Improved BM25 algorithm to search candidate sentences.
- Performed name entity recognition.
- Answer reordering based on syntactic and semantic information.
- Github: <https://github.com/ZhenxiangWang/Question-Answering-System>

## Link Prediction in Network

Jul 2018 - Oct 2018

Team Leader

Predict the existence of a link between two nodes in a network. Achieved AUC 0.855.

- Preprocessing: used NetworkX to construct both directed and undirected graph based on the given network.
- Feature Engineering: Resource Allocation Index + Jaccard Coefficient + Adamic-Adar Index + Preferential Attachment + Cn Soundarajan Hopcroft + Ra Index Soundarajan Hopcroft + Within Inner Cluster.
- Models Selection: LightGBM + DNN + Logistic Regression (Baseline)
- Feature Removal: a set of experiments to remove features and re-trained the model.
- Parameters Tuning: applied Bayesian Optimization automatic approach to find optimal hyper-parameters.
- Github: <https://github.com/ZhenxiangWang/Link-Prediction>

## Shared Whiteboard

Aug 2017 - Oct 2019

Individual

A Shared Whiteboard Based on multi-threaded network programming implemented in Java, which supports multi-person online drawing and chatting.

- Github: <https://github.com/ZhenxiangWang/Shared-White-Board>

## LEADERSHIP EXPERIENCES

### Student Union of Jilin University

Feb 2012 - Sep 2015

Student Representative

- In the dormitory culture festival jointly sponsored by the School of Economics, Law, Political Science, Business and Finance, as a representative of the School of Finance, I organized 34 dormitories to participate in the festival, create characteristic dormitory cultures, and participate in the appraisal. I also presided over the Awarding Ceremony.
- Presided over the New Year Party of Grade 2012 and Grade 2013 of the School of Finance.
- Presided over the Opening Ceremony and Awarding Ceremony of the 2014 freshmen's Sports Meeting.