Zhenxiang Wang

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OBJECTIVE

A person with great enthusiasm for technology, active learning, reliability and attention to detail is 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, Mobile Application Programming, Software Development, Machine Learning, Natural Language Processing, AI Planning, and Cloud Computing.

PROFESSIONAL SKILLS

- **Front-end**: React, Redux, JavaScript, ES6, HTML5, CSS3, Less, Bootstrap, jQuery, SEO.
- **Back-end**: Nodejs, Express, Ajax, EJS, RESTful API, Java, Python.
- **Database**: MySQL, MongoDB, CouchDB.
- **Mobile Application Development**: Swift, Android.
- **Machine Learning**: Natural Language Processing, Deep Learning, Reinforcement Learning, TensorFlow, Keras, Scikit-Learn, Numpy, NLTK, Matplotlib, Weka.
- **Others**: Git, Agile, Scrum, Video Editing.

SOFT SKILLS

- **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

Linghang *Apr 2019 - Present*

Web Developer

Responsible for the planning, design, update, upgrade, deploy and maintenance of web applications across multiple platforms 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 30%.
- 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 and visualize user data.
- Search engine optimization on the website, which improved the ranking of the website by 10.

EDUCATION

The University of Melbourne *Feb 2017 - Nov 2018*

Master of Information Technology *Melbourne*

- **Grade**: H1 (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%)
- **Honors/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

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.

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.

Deep Reinforcement Learning Algorithms Analysis and Optimisation *Feb 2018 - Jun 2018*

Team Leader

We compared the performance of the leading value-based and policy-based deep reinforcement learning algorithms under various game circumstances to explore the reasons for the performance difference and combine them to do the algorithm optimization.

- We utilized TensorFlow to implement Deep Q-Network, a value-based deep reinforcement learning algorithm, and its three variants, Double DQN, Duling DQN, Prioritized Experience Replay. In addition, we implemented the Policy Gradient, a strategy-based deep reinforcement learning algorithm.
- After that, we made five AI agents with these algorithms to play 2D and 3D games on the OpenAI platform and the Microsoft Malmo platform. We then collected, cleaned and analyzed the raw game data to dig the reasons for the performance difference of these algorithms.
- Lastly, we combined the value-based and strategy-based algorithms and implement an AI agent based on Asynchronous Actor-Critic algorithm, which had the best performance of all games.

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.

Sentiment Analysis of Social Media in Melbourne *May 2018 - Jun 2018*

Team Member

Big data analysis of the sentiment data of Twitter users around Melbourne, and correlation analysis with other known data to find out the relationship between sentiment and per capita income, education level, regional security, etc.

- Firstly, we crawled big real-time Twitter data from Melbourne in parallel and stored it in CouchDB.

- After data processing, we calculated Twitter's sentiment scores utilizing CNN + LSTM algorithms.
- Correlation analysis using sentiment scores and other data from each region around Melbourne (proportion of drunken people, education level, per capita income, etc.) to mine their interesting relationships.
- Finally, we visualized the analysis results in real-time on a front-end website to provide a reference for people's decisions, such as choosing the area to live in.

Instagram-like Social Media Mobile App *Sep 2018 - Nov 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.

Shared Whiteboard *Sep 2017 - Oct 2017*

Individual

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

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.