



李杰 (Li Jie)

+65-91310023

reachjie.li@gmail.com

Singapore

Developer



[Resume](#)

[GitHub](#)

[S.O.](#)

[Quora](#)

[LinkedIn](#)

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Summary

Advanced developer with 7 years of experience in coding and maintenance.

Strong believer of Can-do attitude. Expert in system optimisation and performance improvement.

Strong background in mathematics, algorithms, and data-processing.

Education Background

2019.01 - 2020.12, [Nanyang Technological University](#), Singapore, Computer Science, Master Degree

2013.09 - 2017.06, [Liaoning Technical University](#), China, Communication Engineering, Bachelor Degree

Experience

Nanyang Technological University, Singapore

2017.02 - Present · Researcher

- Lead the smart building project, published five papers (two for first author)
- Developed the platform for smart building research, including [wireless sensor network](#) (WSN), mobile application in [Objective-C](#) and backend server in [Java Spring](#)
- Implemented a sophisticated simulation system to present AI-based strategy on web pages, using [TRNSYS](#), [Tensorflow](#), [React](#), [Python](#), [websocket](#) and [pywinauto](#), this study is published on IEEE IoT Journal
- Technical lead of the blockchain project
- Developed smart contract in [Solidity](#) on [Ethereum](#), the Dual-token eco system, corresponding backend in [Node.js](#) and web portal in [React + Redux](#) for energy trading and status monitoring
- Led the mobile-end development team, responsible for the module design of multiple apps that support 6k+ users, including registration, shopping, payment ([Apple Pay](#)) and order systems
- Refactored the [iOS](#) app in [Swift](#) by reducing the amount of third-party libraries from 51 to 13, significantly improved the app running performance and diminished the size of the app from 22.1M to 3.7M
- Fixed several memory leaks and retain cycles. Designed the new architecture, enhanced the app performance by reducing memory cost and improving the network layer's reliability

Nanjing Beiwan Education & Technology LTD. (Shanbay)

2016.07 - 2016.10 · iOS Developer

- Delivered several refactored modules, including Punch Plan, Wordbook, Push Notification, Badge module, the crash rate was always controlled lower than 1.5%
- Developed the Insurance Plan module which was implemented in [React Native](#)
- Integrated [WeChat Pay](#), thus avoiding 30% commission charged by Apple's iAP
- Automation scripts ([fastlane](#)) maintenance
- Open-sourced a component on GitHub

Projects Experience

LNTU EDU Online Project (Personal Project)

2014.08 - 2016.12 · Founder & Developer

[Website](#)

[App Store](#)

[Google Play](#)

[GitHub](#)

- This project had more than 35,000 users and up to 11,000 daily active users. With this application, students can check their GPA and class timetable conveniently
- Developed the iOS app, back-end application and the community forum
- Technology stack in use: *Java*, *Node.js*, *Objective-C*, *Swift*

Objccn.io (Technical Articles)

2015.02 - 2017.06 · Contributor · [Website](#)

- ObjC China (objccn.io) was built to help Chinese to read the foreign language technology documents
- Participated in translating several articles

Publications

Poster Abstract: An Urban Tropical Thermal Comfort Dataset for Smart Buildings, ACM BuildSys '20

2020.11 · 1st Author · [PDF](#) · [DOI: 10.1145/3408308.3431121](#)

In this paper, we present our latest urban tropical dataset for thermal comfort research.

Towards A Wearable Crowdsorce System to Monitor Respiratory Symptoms for Pandemic Early Warning, IEEE Network Magazine Special Issue

2020.10 · 2nd Author · Under Review

In this research, we propose to leverage the ubiquitous wearable devices to develop a wearable crowdsorce system to monitor respiratory symptoms such as cough and fever.

Towards Intelligent Multi-Zone Thermal Control with Multi-Agent Deep Reinforcement Learning, IEEE Internet of Things Journal

2020.09 · 1st Author · Under Review

In this paper, we investigate the multi-zone thermal control with optimised energy usage and canonical thermal comfort modelling.

Lab-on-Mask for Remote Respiratory Monitoring, ACS Materials Letter

2020.06 · Co-author · [PDF](#) · [DOI: 10.1021/acsmaterialslett.0c00299](#)

A smart mask integrated with a remote, non-contact multiplexed sensor system, or "Lab-on-Mask" (LOM) is designed for monitoring the respiratory diseases such as the COVID-19.

DeepComfort: Energy-Efficient Thermal Comfort Control in Buildings via Reinforcement Learning, IEEE Internet of Things Journal

2019.01 · 2nd Author · [PDF](#) · [DOI: 10.1109/JIOT.2020.2992117](#)

We implement a building thermal comfort control simulation environment and evaluate the performance under various settings of DDPG based approach.

App Architecture (Technical Book)

2018.07 · Translator · [PDF](#)

This book explains a range of application design patterns and their implementation techniques using a single example app, fully implemented in five design patterns.

Additionally

I also have great interest in traveling and photography. Photos taken on the road can be found in my [500px](#) page.

Thank you for your time to review my resume.