

# Jack Carrick Xiang Cheng

*Australian Citizen, Sydney Based*

## Career Objective

To achieve career expertise within an innovative and productive company which allows me to apply and enhance my skillsets.

## Summary of Qualification

- **Engineering graduate** with specialisation in **Web Design and Development, Distributed Computing, AI;**
- Well-developed **programming and software development knowledge** through positions including **Web Developer and Software Engineer;**
- In depth technical knowledge of **React, Angular, NodeJS and MongoDB;**
- In depth technical knowledge of **Python, Spark, TensorFlow and Keras;**
- In depth technical knowledge of **Golang, gRPC, Docker, Kubernetes;**
- In depth technical knowledge of **AWS, Linux and Windows Server Administration;**
- In depth technical knowledge of **JavaScript and related framework;**
- In depth technical knowledge of **HTML5 and CSS3;**
- In depth technical knowledge of **PHP language and related frameworks with MySQL backed;**
- In depth technical knowledge of **.Net framework with MS SQL backed;**
- Gear professional development towards **Web Developer, System Administration and Database Administration.**
- Excellent **communication skills and teamwork** by being able to work **collaboratively with various individuals** in order to **achieve common goals;**
- Contribute **scrum practice** for complex products management by utilizing **Jira, Confluence;**
- Strong **problem solving and critical thinking** obtained through a wide range of positions;
- Support Executive Team and carry out system maintenance;
- Collaborate with colleagues in **Agile Environment**, primarily work in **DevOps** practices with the assistance of **Git, Jenkins and Puppet** to build scalable app.
- Provide **data analytics and reports** for executive team to optimise decisions and achieve best business performance.
- Through rigorous testing to ensure secure application deployment and have high career ethics on client data and privacy protection

## Certification

- Oracle Certified Associate, Java SE 7 Programmer
- Oracle Certified Professional, Java SE 7 Programmer
- Zend Certified PHP Engineer
- Python Institute, Certified Professional in Python Programming

## Education

- July 2011 – December 2012 **Master of Engineering (Software) (Part Time)**  
*The University of Melbourne*

**Professional Narrative**

September 2019 – July 2021

ACY Securities

**Senior Developer**

- Generating real time OHLC data on thousands of symbols and apply EA strategy to guide trader decision with Golang and Kafka.
- Developing trading data and account data correction services with Golang concurrency and gRPC.
- Architecting trade portal, analysis portal, CRM portal, wallet portal API interoperability with Restful and Kafka.
- Creating trading cup ranking system, aggregate millions of user data, gain analysis of user trading performance.
- Developing multiple microservices such as SSO, eWallet, Messaging Service etc. connected to live chart viewing, trading management and CRM platform.
- Developing platform UI in ReactJS functional component and JSX.
- Using Laravel 7 MVC as backend connecting with MYSQL to implement various complicated fintech platform modules, used Laravel features such as user defined artisan command, events, queues, notification and socket IO broadcasting to deliver responsive backend solution to serve frontend UI.
- Building sophisticated high frequency trading analysis and strategy algorithm to facilitate forex, stock index and commodity auto trading.
- Coordinating with other project teams to provide API interface and widget component for service integration using postman collaboration tools.
- Restructuring trading platform data model and encapsulate with eloquent ORM, Laravel abstract database repository for high performance data manipulation.
- Migrating legacy system data to new platform data storage using ETL logic and data mangling technique.

May 2017 – September 2019

Literatu Ltd.

**Senior Developer**

- Used Laravel MVC as backend connecting with MYSQL to implement various complicated education platform modules.
- Coordinated with various internal and external developers, designers and administrators to deliver multiple cloud based online services and process heterogenous data sets.
- Designed multiple application system architectures and recommended stakeholders state of arts technology to meet client requirements with the consideration of security, performance, user experience, learning curve, scalability, reusability and code readability.
- Written concise and detailed technical documents and user guide to facilitate rapid service delivery and future reference.
- Built various web components with Angular JS for responsive data communication to deliver best UX design and user experience.
- Used DevOps practice in Agile Environment for rapid development life cycle and coordination of various stakeholders, with Github as version control system, Asana as Kanban boards to track progress of numerous tasks, Jenkins as continuous development environment and Puppet as configuration management for app server scalability.
- Used unit testing and behaviour testing to reduce bugs and build modular function features and ensure minimum security vulnerabilities.
- Used Microsoft Azure and AWS EC2, RDS, S3, Redshift, SageMaker and CloudFront for scalable cloud-based deployment.
- Used various data wrangling techniques and data warehousing ETL logic to extract various data format from various data source and stored, processed in desired data platform.
- Used multiple graph visualizations libraries to present data in interactive and multi-dimension hierarchical way with real time feeding and time series comparison.
- Used OAuth to integrate with Google, Microsoft and published many apps to Google Classroom, Google Drive, Microsoft Teams, Microsoft O365.
- Built various data validation tools to verify data integrity and computation accuracy.

- Used MEAN stack to interact with XAPI and processed various heterogenous data sets in MongoDB aggregate and mapReduce framework and served frontend responsively and presented using Angular in fancy way with SCSS and Typescript.
- Used MEAN stack with Cordova to build various school apps, student apps and parents apps to deploy in IOS and Android system, mainly using Angular, Typescript and SCSS.
- Used MEAN stack to build bot assistant that integrated into Microsoft Bot Framework and deployed in Microsoft Teams.
- Used MEAN stack to build student writing systems with WebSocket to return real time sentence marking result with Python as backend business logic processing framework.
- Used MEAN stack to build student record and gradebook systems that import large excel, csv file and match columns to generate precise data set.
- Used MEAN stack to build learning progression system with single view presentation for various school curriculum dimensions.
- Used Jupiter and Conda Environment with Python Flask to serve request.
- Used various Python machine learning and data processing technology such as Spark, Numpy, Pandas, TensorFlow, Keras to analyse student essay and give insight feedback.
- Used various Python natural language processing frameworks such as OpenNLP, NLTK, Genism, Spacy to analyse student writings.
- Used Symphony Twig templating system to build dynamic feedback templating system.
- Used SSL curl communication to interact with various plagiarism checker API.
- Built SAML backend to implement SSO login on Cloudwork and Sentral.
- Built Application API for other services to fetch data.
- Built data warehouse to consume Sentral and Canvas data in regular automated jobs.
- Built various campaign component and website to facilitate marketing and promotion.

October 2015 – April 2017

Amvig Holdings

**IT Technologist**

- Developed online office automation system using PHP, HTML5 and various JavaScript libraries for all administration, HR, sales, production, financial and logistic department regular works, integrate all factories large amount of staff workflow submission and data storage in single system;
- Designed the system architecture following up design pattern and industry conventions with permission controls, all security concerns and modularised, separation of concern of multiple layers;
- Wrote user manual, design diagram, functions documentation and development change log;
- Constantly trained staff member of system manipulation and added new features according to staff user experience;
- Designed factory Kanban System using Laravel backend and Angular2 frontend to monitor production progress and machine status in real time, automated scenario with management panel for customised GUI settings;
- Build backend SQL connection driver with MySQL and SQL Server to do complex data analysis of factory production and visualise using frontend interactive library such as Highcharts, D3.js, datatable.js and fullcalender.js;
- Data communication and synchronisation with external DB and APIs;
- Created stored procedure and temporal table for complex T SQL query;
- Built Huawei switch, firewall, 1U server and SAN topology and connect with high availability and security;
- Configured Active Directory and Group Policy Object for each department users and user roles;
- Restricted internet access and other resource access of department users;

March 2014 – September 2015

ProPrint Group

**System Engineer**

- Designed ProPrint Scheduling System with the feature of real time staff performance evaluation, task status tracking, order placement, notification system, chatting system, task flow diagram visualisation, calendar interface.
- Designed multiple MYSQL relational database tables in normalised entity and relational data form, ACID property guaranteed throughout backend database.
- Created multiple jQuery AJAX and custom PHP Word Press modules tailored to real time synchronisation requirement;
- Built complicated database table schema and SQL query trigger, stored procedure and prepared statement;
- Constantly monitored Http Log and Sys Log to optimise resource usage, check access IP and block DDOS attack;

- Used Metasploit and Snort IDS procedure to check backend system exploit and patch up;
- Used SPA framework backbone.js for data organization and maintain consistency of browser storage and MYSQL. Use underscore.js functional programming for rapid data processing.
- Added CSS3 attribute to layout and polish the look and feel of site components.
- Built full blown data table, enhance ease of use for staff scheduling and managing tasks and work distribution.
- Used Git versioning to continuously merge legacy code and synchronise all code base.
- Deployed on AWS server with system maintenance performed.
- Built security system, protect from XSS, XSRF and ensure access control of different user roles.
- Supported and monitor system testing, deployment and live production environment.
- Constantly troubleshooting and addressing system issues.

July 2014 – September 2015

Sky High Success Digital Marketing Agency

**Database Administrator**

- Designed multiple tables of MYSQL relational database and normalized data in terms of its composition, reduced data size by half compared to its original CSV form, optimized the performance by investigating user action and implement indexing based on use cases.
- Built complicated database table schema and SQL query trigger, stored procedure and prepared statement;
- Constantly monitored Http Log and Sys Log to optimise resource usage, check access IP and block DDOS attack;
- Used Metasploit and Snort IDS procedure to check backend system exploit and patch up;
- Built interactive user form and enhanced user satisfaction by its intuitive nature, integrated user form with custom table to perform CRUD operation;
- Created multiple jQuery and custom PHP Word Press modules tailored to specific user requirement and provided interface for reusability;
- Added CSS3 attribute to layout and polish the look and feel of site components.
- Integrated brand campaign with MailChimp, Launch Email Marketing Campaign, design and send monthly newsletter promote sales.
- Implemented Dashboard system, visualise all business essentials data in table, dynamic graph with various metrics.
- Built security system, protect from XSRF, XSS, robot user login etc.
- Supported management team in development and testing.

May 2012 – June 2014

CapInfo Ltd. Beijing

**Senior Software Engineer**

- Built an integrated batch processing application to analyse terabyte log data generated by web service cloud, implemented by Hadoop MapReduce API, utilizing MapReduce design pattern to maximise inter-cluster network effectiveness and make code well structured;
- Designed cluster network topology and testing to assure high availability and scalability;
- Collected and exporting analytical result to RDBMS with easy access on web interface by end user;
- Coordinated with System Administrator to achieve product interoperability and optimization.

May 2010 – March 2012

eScholarship Research Centre – The University of Melbourne

**Web Developer**

- Created an elegant, interactive and transitional component that provides targeted community destination to gather artists;
- Created a real time tournament game backed by socket.io and node.js with bootstrap.js and backbone.js as front end;
- Presented artists' artworks based on PHP5 Joomla CMS framework, accompanying with HTML, XML, CSS, unobtrusive javascript (i.e. Mootools, JQuery), AJAX technology stack, which is cross-browser compatible;
- Developed content editing, publishing system as well as registration, data access control and mailing system;
- Reported to manager of progress at each milestone governed by SDLC model towards project management with GIT as version control system;
- Advised peers adequate cutting-edge techniques as well as decision making on alternatives;
- Performed constant backup for the web application with the support of MySQL database;

- Collaborated with fellow colleagues' to streamline operations by means of GIT version control system in agile environment.
- Maintained high profile of system reliability and stability.

June 2006 – April 2007

Institute of Geographic Sciences and Natural Resources Research  
Chinese Academy of Sciences

**Research Assistant**

- Developed a software simulation for the scientific and mathematical modelling of urban sprawl, based on Java;
- Attended and contributing to associated academic meetings and conferences;
- Liaised with research fellows in coordinating application software development, based on diffusion-limited aggregation models;
- Responsible for system backend maintenance;
- Supported project management and operations management on research projects;
- Responsible for equipment and technology maintenance;
- Analysed results and generating experimental reports.

**Language Skills**

Proficient in written and spoken **English**.  
Proficient in written and spoken **Chinese**.

**Referees**

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Portfolio

