ZHANG QIANQIAN

PROFILE

Name: ZHANG QIANQIAN
Email: SOLA.QIANQIAN.ZHANG@GMAIL.COM

Mobile phone: (+65) 87996890
Residential Status: Singapore PR

PERSONAL TRAITS

A team leader and player who highly values and respects the input of each other member in the team, thrive to lead and contribute positively to the team. Effective oral and written communication skills, evidenced by my work history. Demonstrated high level organization skills in doing multiple tasks simultaneously. Independent quick leaner in learning new programming language, highly self-driven, able to work under pressure with minimum supervision.

EDUCATION

Nanjing Forestry University   **Sep 2009 – Jun 2012**
Master of Science in Computer Application
Nanjing Forestry University   **Sep 2005 – Jun 2009**
B.S (Hons.) in Information and Computing Science

WORK EXPERIENCE

MyRepublic Group Pte Ltd
Oct 2022 – Current   **Senior Lead Software Engineer**
Jan 2022 - Sep, 2022   **Senior Software Engineer (Gateway Lead)**

*Key Achievements
- Design and Develop a Gateway service which is as a bridge for Customer Portals, Mobile App and external services to access the backend systems
- Support Mobile 5G and Broadband 10G launch in time
- Build REST APIs
- Involve in the development of new Customer Portals using ReactJS
- Took over Mobile App development alone and successfully handed over to the next colleague
- Study and implement Chatbot with open source platform

Gateway Development
- Lead the design and development of Gateway service using Node.JS, Typescript and Lookback4
- Design and develop multi-tenanted Node.JS service
- Design and develop multi-tenanted unified data structures
- Use multi-tenanted MongoDB to manage data, tenant data is isolated in their own database
- Design SDK services to integrate internal systems
- Integrate with 3rd party services and callbacks, i.e. MyInfo, Payment, Ekyc etc
- Implement high quality unit tests using Mocha and Chai
- Use Gitlab to manage codes and implement merge requests
- Use Gitlab CI/CD and Docker, Kubernetes to implement code deployment

Notification Center Development
- Design and develop Notification Center service using Loopback4 (Node.JS, Typescript)
- Integrate with OneSignal for push notifications
- Implement APIs for Mobile App and backend services to pull / push notifications
- Implement timer to pull notifications from OneSignal to build notification histories
- Use Gitlab CI/CD and Docker, Kubernetes to implement code deployment

Mobile App Development / Refactor
- Develop iOS and Android app using React Native
- Design and Develop user data using Redux
- Develop a few new features for the main countries
- Maintain and develop the GraphQL API service using Node.JS to serve Mobile App
- Using Gitlab to manage codes and implement merge requests

- Manage iOS and Android app deployment and submission to App Store and Google Play Store
- Manage app builds and distribution in App Center
- Involve in Mobile App refactoring

Chatbot Support
- Maintain and develop the GraphQL API service to support Live Chat for 3 countries
- Integrate with Zendesk webhoook to receive messages
- Integrate with Google DialogFlow to understand the messages from customers

Skills
- Javascript (ES6)
- Typescript
- Node.JS
- Loopback4 (a popular Node.JS framework to build backend services)
- ReactJS
- React Native
- Python
- MongoDB
- MySQL
- PostgreSQL
- Redis
- Mocha & Chai
- GraphQL
- Docker
- REST APIs
- Micro Services
- API Integrations
- Agile
- Jira & Confluence
- Software Architecture
- Mobile App Development
- Frontend & Backend Development
- Git
- Gitlab CI/CD
- Kubernetes

MyRepublic Group Pte Ltd
Oct 2020 – Dec 2021   **Senior Software Engineer**

*Key Achievements
- New features development in multiple services, API service, Customer Portals, B/OSS system.
- API integrations with NinjaVan, Ekyc, eSIM
- BAU support
- Keep running Churn Prediction every month

B/OSS Platform Development (Frontend & Backend)
- Prepare technical documentation based on business requirements
- Collaborate with team members to complete the development
- Design user journey between different parties, i.e. Customer Portals, API services, 3rd parties etc
- Design data structures from user journey and analytics perspective
- Database design and maintenance using PostgreSQL and MySQL
- Develop API service using PHP
- Develop user interfaces using kendoUI, Javascript, HTML and CSS
- REST APIs design and development (for both internal and external use)
- Third party APIs and callbacks integrations, i.e. NinjaVan, Jumio (Ekyc), MyInfo, eSIM etc.
- Develop high quality test cases
- Use Git to manage codes

Customer Portals Development
- Analyse and assess feature requirements
- Develop user interfaces using Javascript, PHP, HTML and CSS
- Assess and clean up messy codes

Service Deployment
- Deploy the services using Docker
- Agile, every two weeks

Customer Churn Prediction
- Monitoring ETL pipelines, hotfixes for exception cases
- Monitoring Churn Prediction model pipeline, manually trigger the Airflow job if needed
- Analyse the Churn Prediction results see if need to rebuild the model pipeline with more data to changing algorithms

Skills
- Javascript (ES6)
- PHP
- HTML & CSS
- Python
- MVC
- PostgreSQL
- MySQL
- KendoUI
- Docker
- REST APIs
- Git Management
- API Integrations
- Service Design & Deployment
- Software Design
- Data Pipelines
- Database Design
- Jira & Confluence

MyRepublic Group Pte Ltd
Aug 2019 – Sep, 2020   **Machine Learning Engineer / Junior Data Scientist**

*Key Achievements
- Build customer Churn Prediction model with 92% accuracy (AUC evaluation)
- Setup scalable, efficient and automated data pipelines needed for modelling & data visualisation
- Achieve 5.33% of customer recontract rate with Churn Prediction model
- Improve chatbot response rate by doing chatbot analysis

Customer Churn Prediction
- Understand customer journey through their usages during their subscriptions
- Collect data from various sources for model training
- Implement data cleaning and aggregation
- Implement data analysis and feature engineering
- Build Churn Prediction model
- Improve experiment result with 92% accuracy (AUC as model evaluation)
- Setup Airflow to implement ETLs and monthly customer churn prediction

Uplift Modeling
- Implement feature engineering on the high churn customers
- Build uplift modelling
- Apply uplift score with customers to better decide the campaign targets
- Setup Airflow to implement monthly uplift modelling

Git Repository Analysis
- Collect the company git repositories data
- Clean, organise and aggregate data
- Build data visualisations from different perspectives
- Provide significant insights of company projects progress, engineer efficiency and other information

Chatbot Language Analysis

- Collect chatbot data
- Implement data cleaning
- Implement data analysis, come out with user intents category
- Implement feature engineering
- Implement classification and clustering algorithms

News Aggregator App
- News scrapping from different websites using Python and Selenium
- Store and manage news content in MongoDB
- Implement content similarity algorithms to remove duplicate news

Data Governance
- Standardise organization data to make it more accurate and easier to implement various analysis
- Identify data incompleteness
- Identify insufficient data

Skills
- Python
- Selenium
- Jupiter Notebook
- Javascript (ES6)
- Machine Leaning
- Classification (Binary & Multi)
- Clustering
- MongoDB
- ETL / Data Pipelines
- Redis
- Airflow
- Data Visualization (Matplotlib, Seaborn, Plotly, Bokeh)
- Data Analysis
- Hadoop
- Spark
- Kafka
- TensorFlow
- Jira & Confluence

MyRepublic Group Pte Ltd

Sep 2018 – Jul 2019   **Senior Software Engineer**

*Key Achievements
- B/OSS Mpp module for commission calculation and distribution (monthly since Feb, 2019)
- API integrations with Payment Express
- Build REST APIs
- BAU support

B/OSS Platform Development (Frontend & Backend)
- Prepare technical documentation based on business requirements
- Collaborate with team members to complete the development
- Design user journey between different parties, i.e. Customer Portals, API services, 3rd parties etc
- Design data structures from user journey and analytics perspective
- Database design and maintenance using PostgreSQL and MySQL
- Develop API service using PHP
- Develop user interfaces using kendoUI, Javascript, HTML and CSS
- REST APIs design and development (for both internal and external use)
- Third party APIs and callbacks integrations, i.e. Payment Express
- Develop high quality test cases

Customer Portals Development
- Analyse and assess feature requirements
- Develop user interfaces using Javascript, PHP, HTML and CSS
- Clean up hardcoded codes across all Customer Portals

Service Deployment
- Deploy the services using Docker
- Agile, every two weeks

Skills
- Javascript (ES6)
- PHP
- HTML & CSS
- MVC
- PostgreSQL
- MySQL
- KendoUI
- Docker
- REST APIs
- Git Management
- API Integrations
- Software Design & Development
- Database Design
- Jira & Confluence

Shanghai Indation Pte Ltd
Apr 2018 – Jul 2018   based in Shanghai, China   **Product Owner / Project Manager**

*Key Achievements
- Build the development team from scratch
- Build both frontend and backend infrastructure
- Lead the design of products

Product Design
- Design three web applications: Business Platform, Store and Analytic Platform
- Design one WeChat Mini Program

Project Management
- Coordinate multiple departments to develop a staff-customer interactive Wechat Mini Program for Loreal China
- Collect requirements from clients
- Plan internal development in agile

Product Development
- Lead a 5 developers team including frontend and backend
- Design Micro-services approach
- Plan product development features & the timeline
- Decide Vue.JS for frontend development and build the infrastructure
- Decide eggJS for backend development and build the infrastructure
- Decide MySQL for data storing
- Design data models
- Build data pipelines for analytics
- Use Git to manage codes
- Services deployment and server management (using Ali cloud)

Skills
- Software Architectures and Design
- Product Design
- Product Management
- Project Management
- Database Design
- Data Modeling and Pipelines
- Javascript
- Vue.JS
- Egg.JS

- MySQL
- Ali Cloud
- Micro Services
- Git Management
- Service Deployment
- Customer Relationship Management

WaveO Network Pte Ltd

Sep 2011 – Jan 2018	based in Singapore	**Senior Software Engineer / Marketing Analyst**
Jul 2010 – Sep 2011	based in Nanjing, China	**Software Engineer (Marketing Analysis)**

*Key Achievements
- Build a backend service from scratch which serves more than 2 million Mobile App users
- Build a merchant application which serves around 5 shopping malls in Singapore
- Data syncing mechanism between Mobile App and backend
- Real-time data streaming

Backend Development
- Build CRM and digital marketing platform using PHP
- Implement Micro-services approach using Node.JS
- Develop a backend system managing more than 2 million Mobile App users using Drupal (PHP)
- Design and develop REST APIs
- Design and implement various data tracking from Mobile App
- Implement push notification sending of both iOS and Android from backend
- Use Git to manage codes
- Build dashboards (real-time / non real-time)
- Platform migration from PHP to Node.JS

Frontend Development
- Develop a web application for shopping malls in Singapore to manage their members and customers using PHP
- Develop a web application using Drupal (PHP) with various modules, Card management, User management, Campaign management etc
- Web application migration from PHP to AngularJS

Marketing Analysis
- Implement Mobile App user profile analysis
- Implement marketing campaign performance analysis
- Develop dashboards to provide business with significant insights

Skills
- Javascript
- Node.JS
- Loopback3
- AngularJS
- PHP
- MVC
- HTML & CSS
- Drupal
- MySQL
- MongoDB
- REST APIs
- Micro Services
- Data Analysis
- Data Modeling
- AWS Lambda & EC2
- Real-time data streaming
- Customer Relationship Management

SCHOLARSHIPS / HONORS

First runner up in National Post-graduate Mathematical Contest Modeling (NPMCM)   **Mar 2011**
6000 Post-graduates (more than 300 PhD students) from 229 institutes formed 1995 teams had participated
Outstanding Student   **Jan 2011**
Outstanding Graduate   **Jun 2009**
Merit Student (Awarded to top 2% students) and **Jiangsu Province Government Scholarship** (Awarded to top 1%
students)   **Jan 2009 & Jan 2008**
Merit Student (Awarded to top 2% students) and **National Scholarship** (Awarded to top 0.5% students)   **Jan 2007**

OTHER INFORMATION

Languages
English (Fluent); Mandarin (native speaker); Japanese (able to translate, holding Japanese-Language Proficiency Test
Level N2 certificate)
Certificates Certified Kubernetes Administrator
Notice period: 1 month
Current salary: $7,513 per month ($50 mobile allowance) + 1 month AWS + 2 months Bonus
Expected salary: $8,500 per month, performance based Bonus