

# HU ZIMING

TEL: (+86)1861-832-8360  
MAIL: hzmangel@gmail.com  
BLOG: <http://hzmangel.github.io/>

## SUMMARY

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Senior software engineer at FavoriteMedium. Prime focusing on high performance web services design and development, and have experience on frontend technologies such as jQuery and AngularJS. Have experience on architecting and implementing E-Commerce website.

Formerly HPC scheduler software LoadLeveler developer at IBM, have 4 years experience on Linux development. Was focusing on task assignment and Linux network related areas.

Having been using and maintaining Linux system for more than 10 years; Development with C/C++, Ruby, Python, Golang, MongoDB, Redis, and skillful in Unix utilities such as sed. Have experience on building high scalability web services with MongoDB, Redis and Docker.

## PATENT

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Published patent ***SCHEDULING JOBS IN A CLUSTER*** while working at IBM, publication number is **US 2010/0223618 A1**

## CURRENT OCCUPATION

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### **Favorite Medium**

April 2012 - Present

#### *Senior Software Engineer*

- Specialized in Ruby on Rails backend development work.
- Build high performance services with appropriate language and technologies (Ruby, Python, Golang, Docker).
- Basic frontend development, focusing on Javascript (jQuery, Angularjs).
- Setup deployment automation with Capistrano
- Setup production environment on Heroku, Amazon EC2.
- Integration with external web services, such as Google, Facebook, Twitter, Sinaweibo.

## PAST PROJECTS AND EXPERIENCE

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### **Steelcase Scout**

Apr 2015 - Present

#### *Developer and System Operation*

Steelcase Scout is focusing on solving space booking challenges caused by real estate compression and open office plans with intelligent sensor network.

- Set up and maintain **docker** containers for system, which simplifies deployment on different environments.
- Leader developer for **Tornado** based API server, design and implemented reserve, space check and admin API.
- Design database schema for mobile app, sensor data and big query log.
- Build Jenkins server for code continuous integration.
- Test server load with **Gatling** tool, and optimize code with test result.

### **Starcount**

Feb 2013 - Present

#### *Architect and Developer*

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Starcourt (<http://www.starcourt.com/>) is focusing on calculating popularity for stars over multiple social networks. By tracing the score and activities on the website, user can get better known of different stars. Project contains main site, mobile app, CMS and data collector.

- Architect and leader developer for backend part (data collecting and processing, CMS).
- Design and implement CMS with **Ruby on Rails** for account info management.
- Replace third part calculation and query service with **ElasticSearch** and **Python** scripts, help customer to reduce cost.
- Design **MongoDB** schemas and indexes to optimize data fetching, reduce query time up to **50%**.
- Refactor web crawlers from Ruby to **Golang**, which increases the performance and reduces node used from **30** to **6**.
- Introduce **Redis** for long cycle tasks, which brings better user experience in CMS.

### **LoadLeveler**

Apr 2008 - Apr 2012

*Staff Software Developer (From Jun 2011)*

Being responsible for development and design for LoadLeveler product. Loadleveler is a scheduler for high performance computation. The application is written by C++ and running on Linux/AIX, it provides ability to manage and schedule tasks in big clusters, such as Blue Gene. I have accomplished those features during my work:

- Configuration enhancement: convert file based configuration to database, to make it available in big cluster.
- IPv6 support: replace system calls to IPv6 compatible, and update internal data structure to support IPv6 data.
- Task migration: enable task migration between different nodes or sub-clusters on Linux platform by cgroup.
- Modify resource usage without stopping task: provides function to change resource needed by task on-the-fly to improve the cluster resource usage.

Besides development, I was also respond to system administrator for development cluster environment.

### **Slice Task Manage System for 3D Printer**

Mar 2015 - May 2015

*Developer and DevOp*

*Part-time*

This system is used to manage slice tasks of 3D printer. After getting uploaded models from end user, the system starts the slicing docker container for slicing. The status will be updated to MongoDB and can be queried by query API.

- Architect the API server and implement via **Golang**.
- Design the message transferred between containers.
- Build the system with Docker, and manage containers with Golang API.
- Use **redis PUB/SUB** model to pass commands and status messages between containers.

### **Wenpod Distribution Platform**

Aug 2014 - Sep 2014

*Full Stack Developer*

*Part-time*

Wenpod distribution platform is a full functional e-commerce distribution platform, which provides distributor management, store isolation, balance management and other functions for distribution.

- Architect and implement the database schemas.
- Architect and implement the distribution service structure and backend admin panel.
- Integrate Alipay as payment service.

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**Five Cooking Online Store***Full Stack Developer*

Mar 2013 - Sep 2013

*Part-time*

Five cooking is a e-commerce website which focusing on providing processed vegetable for office workers. This is a full functional E-Commerce website and can provide general function such as cart, balance management, membership point, promotions for user, and a complete admin panel for adminstraor.

- Architect and implement the database schemas.
- Architect and implement e-commerce service.
- Architect and implement frontend pages and backend admin panel.
- Integrate Alipay as payment service.

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**EDUCATION****Beijing University of Posts and Telecommunications***M.S., Signal and Information Processing*

Sep 2005 - Apr 2008

**Beijing University of Posts and Telecommunications***B.S., Information Engineering*

Sep 2001 - Jun 2005

**Online Education**

- Mining Massive Datasets (Coursera), SoA with **Distinction**.