

# HU ZIMING

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## SUMMARY

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Join FavoriteMedium as senior software engineer and prompted to principal software engineer lately. Focusing on architect and develop web services with appropriate software stack, taking leading engineering work for long-running client projects. Have experience on frontend technologies such as jQuery and AngularJS.

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

Having been using and maintaining Linux system for more than 10 years; Develop with C/C++, Ruby, Python, Golang, Nodejs, and skillful in Unix utilities such as sed. Experienced on building high scalability web services with MongoDB, Redis and Docker, experienced on data grabbing and analysis with pandas. Great studying ability on new technologies.

## PATENT

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

## EDUCATION

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### Online Education

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

### Beijing University of Posts and Telecommunications

Sep 2005 - Apr 2008

*M.S., Signal and Information Processing*

### Beijing University of Posts and Telecommunications

Sep 2001 - Jun 2005

*B.S., Information Engineering*

## CURRENT OCCUPATION

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### Favorite Medium

April 2012 - Present

*Principal Software Engineer*

- Join as senior software engineer, and prompted lately.
- Working with customers to clarify requirements and issues.
- Building services with appropriate software stack.
- Specialized in backend web service development work, have experience on various frameworks, e.g. Ruby on Rails, Koajs, Golang, Flask.
- Worked as fullstack developer in some projects.
- Experienced in web crawlers, data mining and analysis.
- Investigate new technologies and share with team.

## PAST PROJECTS AND EXPERIENCE

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## Starcount

Architect and Developer

Feb 2013 - July 2016

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Starcount (<http://www.starcount.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).
- Implement and maintain frontend code.
- 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.

## Steelcase Scout

Developer and System Operation

Apr 2015 - Nov 2015

Favorite Medium

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.

## LoadLeveler

Staff Software Developer (From Jun 2011)

Apr 2008 - Apr 2012

IBM

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

Developer and DevOp

Mar 2015 - May 2015

Side Project

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**.

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- 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.
  - Trying to rewrite some slice algorithms with Scala and Akka.
  - Trying to build online Gcode viewer with Javascript.

### **Five Cooking Online Store**

*Full Stack Developer*

Mar 2013 - Sep 2013

*Side Project*

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 administrator. The first version of this website it built with Rails and second is by AngularJS and ExpressJS.

- 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.