

# Fengguo Tian

fgtian4work@gmail.com

(716)-986-3166

Santa Clara, CA 95051

LinkedIn: <https://www.linkedin.com/in/fengguo-tian-8994425a> Web: <http://fgtian4work.wixsite.com/fengguotian>

## EDUCATIONS

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**M.S. in Computer Science and Eng.** GPA: 3.5/4.0, 2015.5-2016.9. University at Buffalo, State University of New York

**M.S. in Electrical Engineering** GPA: 3.7/4.0, 2013.8-2015.5. University at Buffalo, State University of New York

**B.Eng. in Electrical Engineering** GPA: 3.2/4.0. (80/100), 2009.9-2013.7. Northwest A&F University, China

## TECHNICAL SKILLS

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Programming languages: **Java, Python, MySQL**, HTML, PHP, JavaScript, XML.

Frameworks & tools: **Hadoop, MVC (RESTful, Spring), AWS, LAMP**, Apache Solr, Android Studio, Eclipse.

## WORK EXPERIENCE

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**1. Software Engineer - Big Data (Java)** Xingxinda Equipment Sale Co.Ltd, China; 5 - 8, 2015

- Built the website and implemented the 'Recommendation', 'Chat', 'web statistics' and 'manage' functions.
- **Using Hadoop** to setup the **Distributed Data Center** and process high throughput query.
- Built a KNN model using Java and MySQL by combining Web Statistics and Text Mining to find popular products with 500 MB JSON file and Significantly increased the hit rate of recommendations.

**2. Teaching Assistant** University at Buffalo, State University of New York. 2014,8 - 2015,5

## PROJECTS:

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**1. Implemented a Dynamo-style distributed data storage system in an Android App (Java);** 2016

- Implemented the Node Partitioning, Quorum Replication and Failure handling by using consistent hashing to route the P2P network to guarantee the CAP (Consistency, Availability, Partition tolerance).
- Built the multithreaded network to synchronize distributed server by using TCP/UDP, Java Socket & Lock.
- Implemented concurrent operations to guarantee Total-FIFO order, Atomicity, Consistency, Isolation, Durability.

**2. Built a HealthCare Data Mining and Recommendation System (Java, AWS, MySQL)** 2016

- A data pipeline using **Twitte4J** and Nutch to crawl 2000 websites and 500 MB tweets,
- A **KNN** predictive model built from the professional data model to classify the 1Million tweets.
- A **recommendation system** as data center to rank and feed the personalized advises and news based on user's profiles and feedbacks. After the training stage, the accuracy was improved to 65%.

**3. Built a Social Media Data Mining Search Engine (Java, AWS, MySQL, Solr, PHP, JS)** 2015

- Implemented the Multilingual Retrieval, Content Tagging, Faceted Search, Cross-document analytics and Semantic search by applying the IR theory on the clawed 100 MB tweets.
- Applied the **Alchemy API, gossipy data model and Apache Solr** to study a topic trend and verify the data model with dynamic graphics, the performance was excellent.

**4. Implemented Neural Networks Handwritten Digits Classification (Python, Machine Learning).** 2016

- Implemented a Multilayer Perceptron Neural Network and Logistic Regression, the accuracy was 99%.