

# 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>

## EDUCATION

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

**GPA: 3.5/4.0**

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

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

**Courses List:** Algorithms Analysis & Design, Distributed Systems, Machine Learning, Information Retrieval, Advanced Information Retrieval, Computer Security, Software Engineering and so on.

## TECHNICAL SKILLS

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Expertise in **Java**; Apache HTTP Server/Solr/**Tomcat/Hadoop**, **Python**, Eclipse, **AWS**, HTML, PHP, MySQL. C/C++, JavaScript, Open Source, Android Studio, Linux/Unix, MATLAB, Sublime, IPython, XML.

## Work Experience

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

- Implemented the 'Recommendation', 'Chat' functions, '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 recommendation.

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

## PROJECTS:

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

- A data pipeline using **Twitte4J** and Nutch to crawl 2000 websites and 1Million tweets, a **KNN** machine learning predictive 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 is improved to 65%!

**2. Built a Social Media Data Mining & Retrieval System (Java, AWS, MySQL, Solr, PHP, JS)** 2015

- Built a social media data mining website on AWS by implementing the Multilingual Retrieval, Content Tagging, Faceted Search, Cross-document analytics and Semantic search using the clawed 100 MB tweets.
- Applied the **Alchemy API**, **gossipy data model** and **Apache Solr** to study a topic trend and verify the model with dynamic graphics.

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

- Implemented three main pieces of Dynamo: Partitioning, Quorum Replication and Failure handling based on consistent hashing to route P2P network to guarantee the CAP.
- Built the multithreaded network following TCP/UDP to support concurrent operations (insert/delete/query) and provide ACID and linearizability using java socket and synchronized method and concurrent data type.

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

- Implemented a Multilayer Perceptron Neural Network and Logistic Regression to classify hand-written digit images by coding the NN theory and comparing with the result of the **SKLearn**, the accuracy is 99%.