# Fengguo Tian

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## SUMMARY                                                    Position: Software Engineer

- Background in Distributed System, Data Mining, Information retrieval, Machine Learning and Security
- 3+ years experience in object-oriented Design/programming, Testing and Debugging on cross-platforms;

**Courses:** Algorithms Analysis & Design, Distributed Systems, Machine Learning, Information Retrieval, Advanced Information Retrieval, Computer Security, Software Engineering, Knowledge Bases & Ontologies.

## EDUCATION & ACADEMIC EXPERIENCE

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

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

**B.Eng.** in **Electrical Engineering and automation**          Northwest A&F University — Xi'an, China.
Overall GPA: 80.08/100.                                                                          2009.9-2013.7

- **Teacher Assistant** of Signal Analysis and Transform Methods,   SUNY at Buffalo, NY.   **2015,1-2015,5**
- **Teacher Assistant** of Power System Engineering,          SUNY at Buffalo, NY.   **2014,8-2014,12**

## COURSE PROJECTS:

1. **Implemented a Dynamo-style distributed data storage system in an Android App.       Spring, 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.
- Build 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.

2. **Built Personalized HealthCare Recommendation System (Java, AWS, MySQL)          Spring, 2016**
- A data pipeline using Twitte4J and Nutch to crawl 2000 websites and 1Million tweets, a **KNN** predictive model to classify the data.     **A** personalized **recommendation system** as data center to communicate with users based on the profiles and feedbacks by feeding personalized advises and news with 65% accuracy!

3. **Built a Social Media Data Mining & Retrieval System (Java, AWS, MySQL, Solr, PHP, JS)       Fall, 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.
- applying the **Alchemy API, gossipy data model and Apache Solr** to study a topic trend and verify the model with dynamic graphics.

4. **Implemented Neural Networks Handwritten Digits Classification (Python, Machine Learning). 2016**
- 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 about 99%.

5. **E-mail Forensics with DKIM & Web Security & Symmetric Key Crypto Implementation.     Fall, 2015**
- Using WebGoat to simulate web hacking and implementation Symmetric Key Crypto.
- Wrote C code using Fork – Exec system to apply the core DKIM algorithm.

## TECHNICAL SKILLS

**Programming languages**: Java, Python, C/C++, PHP, HTML, JavaScript, SQL.

**Software:** Eclipse, AWS, Apache HTTP Server/Solr/Tomcat/Hadoop, MySQL, Open Source, Visual Studio, Sublime, Android Studio, Linux/Unix, MATLAB, Simulink.