# Tian Zhang

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## Education

**Columbia University** New York, NY
M.S. in Electrical Engineering, GPA 3.62/4.00 Expected Dec 2015
*Relevant Courses:* Computer Networks, Introduction to Databases, Analysis of Algorithms, Big Data Analytics, Machine Learning, Network Algorithms and Dynamics, Convex Optimization

**Southeast University** Jiangsu, China
B.Eng. in Electrical Engineering, GPA 3.5/4.0 Sep 2010 – June 2014
*Relevant Courses:* C++ Programming, Computer Architecture & Logic Design, Database Techniques & Application

## Technical Skills

Programming Languages: Java, Python, C++, SQL, PHP, JavaScript
Software Tools: Hadoop, Amazon Web Service, MATLAB, Git

## Experience

**Hermes Capital Advisors, LLC** New York, NY
**Software Engineering Intern [Python, SQL, Java]** Jun 2015 – Aug 2015

- Developed a stock price trend prediction module in Python with about 80% accuracy, utilized Random Forest algorithm to train large-scale data in MySQL database.
- Implemented new functions and fixed bugs on previous trading platform system that interacted with TWS API using Java.

## Projects

**Columbia University** New York, NY
**Online Food Delivery Search Engine DBMS [SQL, PHP, HTML, CSS]** Feb 2015 – May 2015

- Designed a food delivery search engine database with E/R diagram and relational SQL schema.
- Set up a real MySQL database hosted on Amazon RDS, using SQL.
- Developed a website front-end for food recommendations based on client's requirements, using PHP, HTML and CSS.

**Machine Learning Programming [MATLAB]** Feb 2015 – May 2015

- Recognized and analyzed digit numbers based on MNIST Handwritten Digits dataset, using k-NN classifier, Bayes classifier and multiclass logistic regression classifier respectively.
- Utilized AdaBoost algorithm based on breast cancer dataset, using Bayes classifier and logistic regression classifier.
- Recommended closest movies for user based on their personality types by K-means.

**Stock Price Movement Prediction Based on Big Data Analysis [Hadoop, Java]** Sep 2014 – Dec 2014

- Integrated available online stock datasets and stored data in Hadoop distributed file system to improve scalability.
- Established stock price prediction model using SGD package and predicted on movement using Java and Mahout.

**Computer Networks Socket Programming [Java]** Sep 2014 – Dec 2014

- Built a mini chat room program supporting both client and server terminals based on TCP/IP protocol.
- Designed a TCP-like protocol to guarantee reliable data transmission with tolerance of bit error, packet loss, packet corruption and packet reordering.
- Implemented distributed Bellman-Ford algorithm to calculate shortest distance between clients in a router network.

**Southeast University** Jiangsu, China
**Virtual Reality Programming [C++, JavaScript, Unity3D]** Apr 2013

- Designed and combined 3 mini games from scenes establishment to function realization using Unity3D & JavaScript.
- Developed a virtual classroom for users "walking around" via keyboards in the scene, using OpenGL as 3D API in C++.

## Honors

National Scholarship (Top 3% students in Instrument Science & Engineering School of SEU) 2011-2012
Merit Student of Jiangsu Province 2011-2012