# Zhi Ji

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## EDUCATION BACKGROUND

**Columbia University** *New York, NY* *(Expected) 09/2018 - 12/2019*
MS in Electrical Engineering, GPA: 3.6/4.0
Relevant Courses: Algorithms, Operating System, Database, Cloud Computing, Stream Processing, Deep Learning, NLP

**University of California Berkeley** *Berkeley, CA* *01/2017 - 12/2017*
Exchange Student in Electrical Engineering & Computer Science, GPA: 3.6/4.0
Relevant Courses: Data Structure, Machine Learning, Communication Network

**University of Electronic Science & Technology of China** *Chengdu, CN* *09/2014 - 07/2018*
BS in Electronic Information Engineering, GPA: 3.8/4.0
Relevant Courses: C Language, Software Fundamentals, Computer System

## PROFESSIONAL SKILLS

- Technical Skills: Python, Java, JavaScript, C, C++, SQL, HTML, CSS, Scala, TensorFlow, Keras, Spark, Kafka, Linux kernel.
- Web Development: React, jQuery, Sass, DOM, AJAX, Node.js, Flask, Django, MongoDB, AWS, Docker, Akka, Play.

## PROFESSIONAL EXPERIENCE

**Jet/ Walmart Lab/e-commerce** | *Software Development Engineer* *Hoboken, NJ* *06/2019 – 08/2019*
- Added features for Parcel delivery web application using React, JSX, jQuery, Django, Flask, Sass, Marshmallow, SQL and docker including front end, APIs and tests.
- Built the barcode scanning page and interface and integrated with the rest of Parcel application workflow.
- Worked on route optimization system for fulfillment center using Akka, Play framework and Kafka in Scala.

**Chinese Academy of Sciences** | *Machine Learning Engineer* *Beijing, CN* *04/2018 - 08/2018*
- Developed several machine learning and deep learning models for stock price prediction and trading strategies.
- Researched on the algorithm for detecting black product attack with imbalanced sample distribution and missing features.
- Published a paper at CSAE 2018: https://dl.acm.org/citation.cfm?id=3277966

**Berkeley Video and Image Processing Lab** | *Research Assistant* *Berkeley, CA* *05/2017 - 12/2017*
- Developed a sensor-based sorghum height and width estimation algorithm with Fast RCNN.
- Programmed in C++ to control and adjust Intel RealSense camera parameters for data collection.
- Published at Electronic Imaging 2018: http://www-video.eecs.berkeley.edu/papers/jihui-jin/jihui-height-ei-2018.pdf.

## PROJECT EXPERIENCE

**Let's Meet** *Columbia University* *02/2019 – 05/2019*
- Built a web service for group meetup that recommends movies, restaurants and shows attendee's location and a chatting room.
- Setup APIs using API Gateway with lambda functions and authentication using Cognito.
- Applied React to implement user interface and hosted the frontend in an AWS S3 bucket.
- Built the SQS, SES, DynamoDB and Elastic Search with machine learning for restaurant recommendation and email notification.

**Stock Price Visualization** *Columbia University* *01/2019 - 05/2019*
- Utilized Kafka and Spark to process raw stock prices data.
- Trained a machine learning model taking the processed stream data as features to generate predictions.
- Built the backend in Node.js, front end in jQuery and d3 for data visualization.

**Multi-thread Server, Scheduler and File System** *Columbia University* *01/2019 - 05/2019*
- Built different types of HTTP multi-thread server in C, including multi-processes, multi-threads and Nonblocking I/O.
- Developed and added the customized scheduler to Linux Kernel and built a Linux file system from scratch.

**Internet of Things and Android Development** *Columbia University* *09/2018 - 12/2018*
- Implemented a RESTful API server with MongoDB, DynamoDB and AWS Lambda for an movement monitoring device.
- Built an Android application communicating with the server, visualizing the data sent from the server.
- Deployed a web site on S3 with an animation character mimicking the user's activity on front end by TensorFlow and JavaScript.

**Computer Vision** *Columbia University* *10/2018 - 12/2018*
- Designed and trained the conditional Deep Convolutional Generative Adversarial Networks with classifier for human face images completion and classification with high performance.
- Refined a deep Q-learning algorithm for image restoration by Double Q-learning, Prioritized Replay and Dueling Q-learning.