# Junjie Ye (Jacob)

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## **Education Background** University of Edinburgh

2014/09 - 2015/11

Artificial Intelligence

GPA: 65

#### **Zhejiang University** of Finance & Ecomomics

2010/09 - 2014/06 Dual Degree

Computer Science GPA: 88/100 Taxation GPA: 89/100

#### **Profile**

LinkedIn: Junjie Ye

#### Skills Certificate

- Qualified Software Engineer
- Stanford University Machine Learning Certificate

#### **Domain**

- Machine Learning / Deep Learning
- Probabilistic Modelling / Bayesian Inference
- Reinforcement Learning / Game Theory
- Natural Language Process
- Speech Recognition
- Knowledge Graph
- Big Data / Data Mining
- Crawler

#### **Projects**

- HMM-GMM ASR System
- Kaggle Car Driver Identification
- Reinforcement Learning Coursework
- Game Theory Coursework
- Information Theory Coursework
- Business Intelligence
- Book Management System
- Tax Invoicing System

#### Skillset

- Tensorflow / Theano / Keras
- Hadoop / Spark / Hbase
- Docker
- Scrapy
- Flask
- MongoDB
- Neo4j / ArangoDB
- Redis
- Weka

#### Programming Language

Python • Java • Shell • Matlab • C/C++ • SQL • JavaScript • HTML/CSS • Markdown • LATEX

### **Working Experience Emotibot Technologies Limited Research Engineer**

Shanghai, China 2016/04 - Now

Bot Memory Team:

Design and implement Multi-Modal Architecture (Rule Engine + Machine Learning / Deep Learning) to memorize user information, including personal information, emotional status, habbits etc., within a conversational UI. Thereby making the bot more intelligent in understanding the context and intents.

The system is implemented by Java, intergrated with multiple learning models via RESTful API. The deep learning part is based on TensorFlow. The input of the models is transformed by word2vec from raw sentences to vectors. The learning models use various architectures such as RNN, LSTM, GNU. The online accuracy of the system is over 90% and the offline accuracy is over 80%. The emotional status module is applying for a patent.

• Knowledge Graph Team:

Construct large-scale knowledge graph, including general knowledge and domain knowledge (music, movies, sport, e-commerce etc.). Use Scrapy to build the web crawler part, and store data into HBase / MongoDB. Run ETL via Map-Reduce and data-mining via Spark. Store the knowledge entities and relations by Graph DBs (Neo4j / ArangoDB). The current scale of the knowledge graph has exceeded 10 million entities and millions of relations.

## Standard Chartered Bank

IT Department Intern

Ningo, China 2013/10月 - 2014/01

- Co-operate credit evaluation for enterprises. Following and reporting customer credit evaluation results.

  • Co-operate bank's financial systems maintenance.

#### Ningbo Economic & Information Commission Ningbo, China 2013/01 - 2013/02 Intern

Learn industrial policies and standards of IT industry.

#### Xerox Businiess Co., Ltd.

Ningbo, China 2012/07 - 2012/08

IT Department and Dispatch Center Intern Deal with computer maintenance and software fault.

### China Telecom

Ningbo, China 2011/07 - 2011/08

**Network Department Intern** 

• Co-operate network breakdown disposal.

# Research Experience

## **Recurrent Neural Network Acoustic Models**

#### Postgraduate Thesis

2015/06 - 2015/08

Worked with Prof Steve Renals and Liang Lu in using recurrent neural network to address acoustic modelling problem in the Speech Recognition systems. The goal is to achieve better performance by recurrent neural network acoustic models over deep neural network acoustic models, and to investigating methods to improve recurrent neural network acoustic models. The project used Theano and Kaldi for constructing the whole Speech Recognition system.

#### Design and Implementation of Credit Evaluation System in Commercial Banks

**Undergraduate Thesis** 

2014/02 - 2014/05

Inspired by the intern experience in Standard Chartered Bank, this financial system tries to automate the credit evaluation process in the commercial banks. The system is constructed using Java EE, and implemented using the industry standard tools (hibernate, struts and spring).