# Yao Zhang

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### **Education**

University Of Oxford

MSc in Computer Science, especially in Deep Learning with Distinction Dissertation
University of Nottingham

BSc in Computer Science, First Class degree, Rank: top 5%

Oxford, UK

Oct 2014—Oct 2015

Nottingham, UK

Sep 2011—July 2014

**Work Experience** 

Senior Software Engineer, Intel R&D Asia, Shanghai

March 2017-Now

Research and Developing advanced NLP algorithm such as TreeLSTM, SPINN, Deep Speech and so on

Software Engineer, Intel R&D Asia, Shanghai

May 2016-Feb 2017

Work on large-scale deep learning research and development

- As a main author (contributions ranked #2) of BigDL: Distributed Deep Learning Library for Apache Spark
- Developed deep learning models e.g. ResNet, RNNS(LSTM, GRU), Word2Vec, Fast-RCNN and so on
- Successfully delivered large-scale deep learning solutions to customers including Vision, NLP and so on.

Part-time developer, Development Team, EASA Software, Oxford

Feb 2015-July 2015

Worked on a J2EE platform for fast authoring, publishing web applications and automatically transforming Matlab and Excel programs to web applications.

• Developed Java Web Applications, solved problems including Java, Database, Security, JavaScript and so on.

**Research Intern**, Intelligent Modelling & Analysis Research Lab, Nottingham Use NLP technique to

July 2014-Aug 2014

- Identify and annotate the risk factors automatically for Heart Disease in Diabetic Patients
- Solved Natural Language Processing (NLP) tasks with **Java** and **Python**, obtained 84% accuracy.

**Developer Intern**, University of Nottingham, ASAP Research Group

Jun 2013-Aug 2013

Worked with a team on a project which aims to optimised the freight transportation at Ningbo port

- Developed an Android app as client and an admin website for transportation management
- Functions includes GPS positioning, vehicle tracking, task allocating and daily reporting;

## **Projects**

Made useful tools and websites in *Java*, *C*++, *Matlab*, *Python* and *J2EE* with 10+ projects. Details in the project list on http://psyyz10.github.io/projects/.

## BigDL: An open source distributed deep learning Library for Apache Spark (Link)

- An open source project on GitHub with thousands of stars, natively integrated with Apache Spark
- As a main contributor with ranked #2 contributions

#### Stock Prediction with deep learning (Master Dissertation) - High Distinction (Link)

- · Proposed an approach using financial reports to predict stock market trends with modified deep learning models
- To learn sequential information of the events, proposed a new model by combining RNN-RBM and DBN
- Achieved a **top ranked** mark among the students in MSc Computer Science at the University of Oxford

### Plant Disease Diagnosis Application (Undergraduate Dissertation) - First Class

- Developed an android application to identify plant diseases automatically based on leaf appearance
- · Computer vision and machine learning techniques are applied and programmed with Matlab and Java

## A Mobile Auction Online System - First Class

• As a technical leader and main programmer within a group built an online auction mobile system with J2EE

### **Honors and Awards**

### High Achievers Awards for academic excellence

2012-2013

For top 10 (out of 180) students in Computer Science department at the University of Nottingham

#### Head's Scholarship for academic excellence

2011-2012

For top 15% students at the University of Nottingham

## **Professional skills**

**Professional:** Scala, Java, Haskell, Torch **Proficient:** Python, MatLab, C/C++, Keras, MySQL, TensorFlow, Spark

Prior Experience: Latex, MongoDB, R, JavaScript, CSS/Sass, Coq, OpenGL, Maven, Android, JSP

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## 教育背景

牛津大学 (世界排名前五)

牛津,英国

计算机科学硕士学位(深度学习), 获优秀毕业论文

2014/10-2015/11

诺丁汉大学(世界排名前百)

诺丁汉,英国

计算机科学学士,一等荣誉学位,排名:前5%

2011/9 - 2014/06

### 工作经验

高级软件工程师, 英特尔亚太研发, 上海

2017/3 至今

研究和开发NLP算法,如TreeLSTM, SPINN, Deep Speech等

软件工程师, 英特尔亚太研发, 上海

2015/5-2017/2

从事大规模深度学习开发

- 作为主要贡献者(贡献排名第二)开发开源项目BigDL: 基于Apache Spark的开源分布式深度学习框架
- 实现深度学习模型如 ResNet, RNNS(LSTM, GRU), Word2Vec, Fast-RCNN
- 成功地为客户公司解决大规模机器学习的相关问题,包括机器视觉和自然语言处理方面。

## 兼职软件工程师, 开发组, EASA Software, 牛津

2015/2-2015/7

• 开发Java网络应用,解决Issues,包括前端以及后端的Java,数据库,安全等

**助理研究员**,诺丁汉大学智能建模和分析研究组,诺丁汉 用自然语言处理技术 2014/7-2014/9

- 开发一个程序给定医生写的病历,来自动识别和病标注糖尿病病人得心脏病的风险因素
- 利用Java和Python解决自然语言处理相关任务,准确率达84%

## 暑期实习, 诺丁汉大学, ASAP研究组

2013/6--2013/8

优化港口货物运输

- 开发了一个给司机的Android客户端和一个运输跟踪和管理的网站
- 实现GPS定位, 车辆跟踪, 调度优化, 任务自动分配, 每日报告等功能

### 项目

用**Java**, C++, Matlab, Python和**J2EE**等制作了有用的工具和网站,项目数量10+。详细信息请参考项目列表,链接 http://psyyz10.github.io/projects/.

BigDL: 基于Apache Spark的开源分布式深度学习框架 (链接)

- 数千星星的GitHub开源项目,可以直接在Spark和Hadoop集群上运行,性能可以与主流GPU媲美。
- 作为主要贡献者,贡献排名第二

用深度学习做股票预测 (硕士论文) - 牛津大学研究生优秀论文 (链接)

- 提出了一个用金融报告通过多种深度学习模型来预测股票走势是的方法,并与state-of-art机器模型比较
- 为了捕捉事件序列化信息,组合RNN-RBM和DBN,提出一种新的模型
- 取得了在牛津大学计算机系的学生中的高排名分数

### 植物疾病诊断手机应用

- 开发了一个安卓手机应用,通过拍照叶片表面来来自动识别植物疾病
- 应用计算机视觉和机器学习技术,主要编程语言是Matlab和Java

### 一个移动拍卖系统 - 一等成绩

- 在一个团队里,作为一个技术领导者和主要程序员
- 用JSP, Java Sevlet以其前端开发语言建立了一个完备的网上竞拍和购物的移动系统

### 荣誉和奖项

学术高度成就奖学金

2012-2013

奖给 University of Nottingham 大学计算机系所有学生中,成绩排在前十名(在180人中)的学生

院长学术成就奖学金

2011-2012

奖给 University of Nottingham 计算机系,成绩在前15%的学生

## 专业技能

专业: Scala, Java, Haskell, Torch 熟练: Python, MatLab, C/C++, Keras, MySQL, TensorFlow, Spark 有过经验: Latex, MongoDB, R, JavaScript, CSS/Sass, Cog, OpenGL, Maven, Android, JSP