

# William Zhao

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## Education Background

Beijing University of Posts and Telecommunications (master)	Electronics and Communication Engineering	09/2016-Present
Beijing University of Posts and Telecommunications (bachelor)	Digital Media Technology	09/2012-07/2016

## Professional Skills

- ✧ C++, Python, Java, C# & SQL, Hive QL & Linux, Git
- ✧ Pytorch, Caffe, Tensorflow & Hive, Hadoop & OpenCV & Azkaban
- ✧ Machine Learning, Deep Learning, Time Series Forecasting, Image and Audio Processing

## Project Experience

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|--|-----------------|
| ✧ Microsoft Research Lab - Asia - Machine Learning - Research Intern   | 12/2017-Present |
| <ul style="list-style-type: none"><li>• Multi-step ahead time series forecasting algorithm: Empty container return and release forecasting</li><li>• Spatial-temporal forecasting: combine extra features &amp; graph embedding</li><li>• Multi-step head time series forecasting strategy: recursive strategy, direct strategy, etc.</li><li>• Hierarchical time series forecasting algorithm aptimization: regularization for sparse adjustments</li></ul> |                 |
| ✧ Didi Chuxing - CTO - DiDi Research Lab - Machine Learning Algorithm Intern   | 02/2017-10/2017 |
| <ul style="list-style-type: none"><li>• Prediction model of driver churn rate: predict driver churn rate with GBDT model, AUC : 0.8</li><li>• Intelligent allowance model: provide users with an allowance intelligently based on conversions rates</li><li>• Regional operation: regional city cluster for localization strategy</li><li>• Built Credit score system &amp; Built the Personas</li></ul>   |                 |
| ✧ Nokia Shanghai Bell Lab - MWC 2017 - Face Recognition - Project leader   | 05/2017-09/2017 |
| <ul style="list-style-type: none"><li>• Face recognition: convolutional neural network, AlexNet model, accuracy : 97%</li><li>• Face detection: based on HOG feature and Adaboost algorithm</li><li>• Architecture design: system architecture, interfaces design</li></ul>  |                 |
| ✧ State Grid Corporation of China - Insulator quality control - Project leader   | 12/2015-09/2016 |
| <ul style="list-style-type: none"><li>• Table recognition and segmentation: Hough Transform</li><li>• Handwriting recognition of the contents of the segmented table, accuracy : 98%</li></ul>   |                 |
| ✧ Robotu Inc. - Location and identification of house number - Algorithm Intern   | 04/2016-07/2016 |
| <ul style="list-style-type: none"><li>• House number recognition: based on Tessorect. Accuracy rate improved from 50% to 75%</li></ul>   |                 |
| ✧ Developed audio and image processing software without the third-party library  | 06/2015         |

## Scholarship and Awards

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|---|-----------------|
| ✧ Prize for The Best Technology in Microsoft Beijing Hackthon、The First Prize Scholarship   | 10/2016-10/2016 |
| ✧ National Scholarship for Encouragement、Merit Student、<br>The Third Prize in National Innovation and Entrepreneurship for Undergraduates、<br>The Third Prize and The Best Program Design Prize in China International Youth Animation and New Media Creative Contest | 01/2015-01/2016 |
| ✧ Outstanding League Cadre、Study Progress Prize   | 01/2014-01/2015 |
| ✧ The Third Prize Scholarship、Outstanding Student Cadre   | 01/2013-01/2014 |

## Extra-Curriculum Activities

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|--|-----------------|
| ✧ Youth League Committee Secretary、Party Branch Secretary  | 10/2013-03/2016 |
| <ul style="list-style-type: none"><li>• Organized Volunteer activities e.g. “Care elders in nursing home” 、 “Care patient in Songtang Care Hospital”</li></ul> |                 |
| ✧ League branch Secretary、Monitor  | 02/2013-09/2013 |
| <ul style="list-style-type: none"><li>• “The 129 Art Show” (won the first prize), Founded the Student Union Affiliated to DMDA Department.</li></ul>           |                 |

# 赵之源

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个人主页: <http://www.zhiyuanzhao.com>

政治面貌: 中共党员



## 教育背景

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|---------------|--------|-------|-----------------|
| ✧ 北京邮电大学 (硕士) | 电子信息工程 | 推免研究生 | 2016/09~至今      |
| ✧ 北京邮电大学 (本科) | 数字媒体技术 |       | 2012/09~2016/07 |

## 专业技能

- ✧ C++, Python, Java, C#, Shell & SQL, Hive QL & Linux, Git
- ✧ Pytorch, Caffe, Tensorflow & Hive, Hadoop & OpenCV & Azkaban
- ✧ 机器学习, 深度学习, 时间序列预测, 图像处理

## 实习及项目经历

- ✧ 微软亚洲研究院-机器学习组-实习研究员 2017/12~至今
  - 多步时间序列预测算法: 船运空箱调度任务中空箱数量及相关数据的预测
  - 时空预测算法: 组合空间信息和船运网络信息提高预测准确度
  - 多步时间预测策略: 直接多步预测, 递归多步预测, 多输入多输出多步预测等
  - 分层时间序列预测优化: 计算分层序列预测调整值时加正则化处理以达到稀疏调整的目的
- ✧ 北京嘀嘀无限科技发展有限公司-CTO-大数据技术部-机器学习算法实习生 2017/02~2017/10
  - 车主流失率预估模型: 使用 GBDT 模型预估车主流失率, AUC : 0.8
  - 智能补贴项目: 转化率预估模型预估用户对发券激励的转化率, 然后使用整数规划求解最优值, 节省成本 30%
  - 区域运营: 对城市特征进行聚类, 以对于不同城市簇实行不同运营策略
  - 信用分的规则制定及平滑策略实现 & 用户行为画像的构建
- ✧ 诺基亚贝尔实验室 2017 年世界移动大会 (上海) Edge+项目-人脸识别部分 2017/05~2017/09
  - 人脸识别算法: 使用卷积神经网络 AlexNet 进行人脸识别, 准确度 97%
  - 人脸检测算法: 基于 Haar 特征的 Adaboost 人脸检测
  - 项目架构设计: 项目架构及算法流程设计、传输接口设计
- ✧ 国家电网 (电科院) 绝缘子质量控制措施及监测技术研究项目-图像识别部分 2015/12~2016/09
  - 表格识别定位算法: 基于 Hough Transform 的表格定位分割
  - 手写数字识别算法: 基于 Tesseract 的手写数字识别, 准确度 98%
- ✧ Robotu 公司-机器人视觉组-门牌号定位及识别项目-计算机视觉算法实习生 2016/04~2016/07
  - 自然场景下门牌号识别: 基于 Tesseract, 识别准确率由默认识别模型的 50%提升到 75%
  - 自动化构建自然场景门牌号数据集: 自动生成并与谷歌街景图中的门牌号图像随机混合。
- ✧ 开发图像处理和音频处理工具 2015/06~2015/07
  - 不借助第三方处理库实现图像边缘检测和音频变调等处理。

## 获奖情况

- ✧ 微软 Beijing Hackthon 2016 最佳技术奖、一等奖学金 2016/10~2016/10
- ✧ 国家励志奖学金、大学生创新比赛国家级项目三等奖、三好学生  
中国国际青少年动漫与新媒体创意大赛三等奖和最佳程序设计奖 2015/01~2016/01
- ✧ 优秀团干部、学习进步奖、优秀学生干部、三等奖学金 2013/01~2014/01

## 学生工作及社会实践

- ✧ 数媒学院分团委副书记 & 12 级本科生党支部副书记 2013/10-2016/03
  - 组织开展“慰问敬老院老人”、“松堂关怀医院献爱心”及“喜迎新生”等志愿者活动。
- ✧ 数媒学院大班团支书 & 大班班长 2013/02-2013/09
  - 组织“129 文艺汇演”文艺活动获第一名, 筹备数媒学院学生分会成立。