

# Wenjie Hu

COMPUTER SCIENCE · BUSINESS INTELLIGENCE

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“Make the change that you want to see in the world.”

## Position Held

### Alibaba Cloud · Cloud Product Research & Development

ALGORITHM ENGINEER, MACHINE LEARNING (INTERN POSITION)

Hangzhou, China

Sep. 2017 - PRESENT

## Education

### ZJU (Zhejiang University)

MASTER IN COMPUTER SCIENCE AND ENGINEERING

- Got a VMWARE Scholarship which is given to promising students.

Hangzhou, China

Sep. 2017 - PRESENT

### HIT (Harbin Institute of Technology)

UNDERGRADUATE IN SOFTWARE ENGINEERING

Harbin, China

Sep. 2013 - Jun. 2017

## Research

### Graph Embedding

- Rui Feng, Yang Yang, **Wenjie Hu**, Fei Wu, and Yueting Zhuang. **Representation Learning for Scalefree Networks**. In Proceedings of the 32th AAAI Conference on Artificial Intelligence (AAAI'18).

### Time Series Modeling

- **Wenjie Hu**, Yang Yang, Zilong You, Zongtao Liu and Xiang Ren. **EvoNet: Evolutionary Graph Neural Network for Time Series Modeling**. In Reviewing of the 33th Conference on Neural Information Processing Systems (NeurIPS'19).
- **Wenjie Hu**, Yang Yang, Liang Wu, Zongtao Liu, Zhanlin Sun and Bingshen Yao. **Capturing Evolution Genes for Time Series Data**. In Reviewing of the 28th ACM International Conference on Information and Knowledge Management (CIKM'19).
- Ziqiang Cheng, Yang Yang, Wei Wang, **Wenjie Hu** and Yueting Zhuang. **Time2Graph: Revisiting Time Series Modeling with Dynamic Shapelets**. In Reviewing of the 33th Conference on Neural Information Processing Systems (NeurIPS'19).

## Honors & Awards

Jan. 2019 **Excellent Projects**, The 2018 Intelligent Measurement of State Grid of China

Hangzhou, China

Sep. 2018 **The Second Place**, Pudong-Baidu Smart Finance Geek Competition

Beijing, China

## Experience

### State Grid of China · HuaYun Group (Internship)

ALGORITHM ENGINEER & TEAM LEADER (5-PERSON TEAM)

Hangzhou, China

Mar. 2018 - PRESENT

- Developed the “evolution genes of time series” for predicting the clock error of the watt-hour meters.
- The method was formed into one paper and was submitted to **CIKM'19**.
- The method was tested on 2600w watt-hour meters in Zhejiang Province, achieving over-80% accuracy. **It has been applied.**
- I led a team to finish these projects from State Grid of China, such as data cleaning, anomaly detection, user electricity behavior modeling, etc. We won the **Excellent Projects** of the 2018 Intelligent Measurement of State Grid of China.

## China Telecom · HaiGao Group (Laboratory Research)

DATA ANALYST

Shanghai, China

Mar. 2017 - Jan. 2018

- Explored the patterns of the abnormal network devices from the past log files.
- The method was formed into one paper and was submitted to **NeurIPS'19**.
- Developed the tools for detecting the anomaly of network devices, which **has been applied and running well for one year**.

## Pudong·Baidu Smart Finance Geek Competition

CAPTAIN

Beijing, China

23th - 26th Aug. 2018

- Led a team to take part in this competition, competing with the top universities in China for the problem of reading comprehension in the financial field.
- We won **the second place** in the hackathon and the fourth place in the Creative Idea Competition.

## Undergraduate Research (Graduation Project)

WEB ENGINEER

Harbin, China

Oct. 2015 - Jan. 2016

- Heilongjiang Urban and Rural Planning Data System, which is a subproject of the 13th Five-Year Plan
- The system includes: complex questionnaire subsystem, data cleaning and standard value verification, model fitting, etc.
- The system adopts the architecture of NodeJS + MongoDB + Redis, which has a certain ability to withstand the pressure.

## Alibaba · YunOS Group (Internship)

WEB ENGINEER

Hangzhou, China

Jul. 2015 - Sep. 2015

- Completed the task of the official website of YunOS (Version 4.0).
- Joined and completed some parts of the "left screen" service platform of YunOS.

## Extracurricular Activity

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### The Graduate Association of computer college in zhejiang university

MINISTER OF CULTURE AND SPORTS

Hangzhou, China

Sep. 2017 - Jan. 2018

### Alibaba Technology Club

PRESIDENT

Harbin, China

Sep. 2015 - Sep. 2016

### National Second-level Basketball Referee

Harbin, China

Dec. 2015

# 胡文杰

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个人主页: <https://vachelhu.github.io>  
实验室: 浙江大学DCD数字多媒体实验室 (师从 杨洋)  
工作意向: 机器学习 · 商业智能



## 教育学历

2017.09-2020.03	浙江大学	计算机科学与技术学院	计算机科学与技术专业	研究生
2013.09-2017.06	哈尔滨工业大学	计算机科学与技术学院	软件工程专业	本科

## 科研成果 (Time Series Modeling & Graph Embedding)

- **Wenjie Hu, Yang Yang, Zilong You, Zongtao Liu and Xiang Ren. EvoNet: Evolutionary Graph Neural Network for Time Series Modeling.** (NeurIPS'19) 在投
  - 提出演化状态图来分析时序背后状态的转移, 通过图神经网络推导背后因子的相互作用, 构建可推理可解释的时序分类预测模型
- **Wenjie Hu, Yang Yang, Liang Wu, Zongtao Liu, Zhanlin Sun and Bingshen Yao. Capturing Evolution Genes for Time Series Data.** (CIKM'19) 在投
  - 提出用CVAE-GAN学习时序的生成, 找到产生时序背后的行为, 挖掘行为的演化, 提高预测的准确性
- **Rui Feng, Yang Yang, Wenjie Hu, Fei Wu and Yueting Zhuang. Representation Learning for Scale-free Networks.** (AAAI'18), [PDF] 已发表
  - 利用欧式空间的特性表示无标度图, 采用球体包装的方法, 对度进行惩罚, 已达到良好的embedding效果
- **Ziqiang Cheng, Yang Yang, Wei Wang, Wenjie Hu and Yueting Zhuang. Time2Graph: Revisiting Time Series Modeling with Dynamic Shapelets.** (NeurIPS'19) 在投
  - 提出用图 (graph) 表示shapelets之间的转移, 将时序映射为图中的某一路径, 通过graph embedding对时序进行表示特征学习, 应用在反窃电的应用上

## 实习经历

2018.03-至今	浙江华云科技 (国家电网)	算法研究 & Team Leader
	<ul style="list-style-type: none"><li>研究电能表时钟计量误差趋势相关算法, 开发相应分析工具</li><li>带领团队研究数据清洗与异常检测、用户用电行为建模分析等课题</li></ul>	
2015.07-2015.09	阿里巴巴YunOS事业群	前端工程师
	<ul style="list-style-type: none"><li>完成YunOS官网4.0版本开发任务</li><li>参与并完成YunOS手机系统“左一屏”服务平台</li></ul>	

## 获奖情况 (竞赛 & 奖学金)

2019.01	浙江省国家电网2018“智能量测”优秀课题	国家电网
2018.09	浦发·百度“智慧金融极客挑战赛”第二名	浦发银行 & 百度云
	• 带队代表浙江大学与包括香港在内的国内顶尖高校同台竞技于金融领域的阅读理解问题	
2018.10	校级专项奖学金	浙江大学

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## 项目研发

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2018.03-2019.01	国家电网（浙江）· 电能表时钟误差趋势分析与预测算法	算法研究 & 工具开发
	<ul style="list-style-type: none"><li>• 研发“<b>时序基因</b>”算法，准确预测电能表的时钟误差趋势与异常事件</li><li>• 相关研究成果目前投稿于<b>CIKM2019</b></li><li>• 算法在浙江全省 <b>2600w</b> 电表上进行实地测试，取得80%以上的准确率。目前已<b>落地应用</b></li></ul>	
2017.03-2018.01	中国电信（上海）· 网络设备异常检测研究	数据分析 & 工具开发
	<ul style="list-style-type: none"><li>• 分析网络设备日志数据，研究造成设备异常的特征或原因</li><li>• 研究“演化状态图”模型，自动分析推导异常原因，研究成果目前投稿于<b>NeurIPS 2019</b></li><li>• 开发用于检测异常的相关工具，目前已<b>落地应用</b>，线上良好运行<b>满一年</b></li></ul>	
2015.10-2016.01	国家“十三五”规划子项目：黑龙江城乡规划数据系统	WEB全栈开发
	<ul style="list-style-type: none"><li>• 该项目是本科的毕业设计，开发针对黑龙江省城乡规划的数据统计与分析系统</li><li>• 系统包括：复杂逻辑的问卷子系统，数据清洗与标准值校验，模型拟合等功能</li><li>• 系统采用nodejs+mongodb+Redis的架构，具有一定的抗压能力</li></ul>	

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## 专业擅长

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- 方向Time Series Modeling和Graph Embedding，着眼于商业场景下应用算法研究
- 熟练Python, C++, 熟练Tensorflow, sklearn, numpy, pandas等工具
- 熟悉MPI, CUDA等并行计算工具，了解Spark等分布式计算架构
- 熟悉Javascript，熟练WEB开发
- 熟悉Linux

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## 社团与特长

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2017.09-2018.01	浙江大学	计算机学院研究生会	文体部部长
2015.09-2016.09	哈尔滨工业大学	阿里巴巴俱乐部	主席
2015.12	哈尔滨工业大学	国家篮球裁判二级证	