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### 实习经历

#### 机器智能与翻译研究室 - 研究助理

2018.05 - 2018.08

该研究室从属于世界上最大的自然语言处理实验室哈尔滨工业大学"语言语音教育部-微软重点实验室"。

- 负责设计与开发"医疗信息处理平台"的界面与功能整合(项目地址: https://github.com/kuangmeng/MedicalTextInfo)
- 参与设计与开发一款离线审讯录音系统,接收用户连续语音输入并实时转化为文字保存

#### 哈尔滨雷掣科技 - 研发工程师

2017.01 - 2017.04

依托哈工大创业园的初创公司。其核心产品包括爬楼车、监控系统,曾获浙江卫视科技真人秀《铁甲雄心》第二季冠军。

• 参与爬楼车"检测楼梯","调用舵机根据货物重量与方向等信息实时调整"等功能的算法设计与整体开发

### 开源项目

### 基于机器学习的多序列比对

2018.09 - 2019.10

项目地址: https://github.com/kuangmeng/MLProbs

- 基于机器学习,通过对原始蛋白质序列分类从而选择合适的对齐策略
  - o Progressive 策略:通过计算后验概率 (HMM),进而计算序列间距离,并由此构建"Guide Tree",最后自底向上进行对齐
  - o Non-Progressive 策略:以序列字典序进行对齐
- 通过计算对齐序列的"列得分"识别"不可信区间"与"极可信区间",分别进行后处理

### 面向领域移植的高精度分词系统

2017.11 - 2018.06

项目地址: https://github.com/kuangmeng/GraduationProject

- 实现了一个以CRF与Viterbi算法为核心, N-Gram以及产生式规则作为后处理的分词系统
- 整合针对不同领域命名实体的识别模块,从而实现特定领域(医疗、司法、金融)文本的高精度分词

资源获取器 2016.12 - 2017.01

子项目: SourceGet, 地址: https://github.com/HITAmigos/SourceGet

- 整合语音搜索、语音阅读、视频、音乐、书籍(扫码搜书)、图片等资源的获取
- 实现多进程、多线程下载, 断点续传, 并可以调用迅雷下载

子项目: SourceOffer, 地址: https://github.com/HITAmigos/SourceOffer

多线程定时爬虫、并对数据进行倒排索引,方便搜索

## 专业技能

- 框架: Structs 2 (熟练应用) 、Scikit-Learn (熟练应用) 、Keras / TensorFlow (掌握)
- 开发相关: Android (掌握) 、Git (熟练应用) 、MySQL (掌握) 、RESTful (掌握)
- 编程语言: Java / Python / C/C++ (熟练应用)

## 教育经历

## 香港大学 - 计算机科学 研究型硕士

2018.09 - 2020.07

• 荣誉: 全额奖学金

• 相关课程: 凸优化、机器学习、深度学习

### 哈尔滨工业大学 - 计算机科学与技术 本科

2014.09 - 2018.06

- 学分绩: 89.6 / 100 (名次: 23 / 226)
- 荣誉: 国家励志奖学金 (2014-2015, 2015-2016) 、企业奖学金 (2017-2018) 、人民奖学金若干
- 相关课程:数据结构、算法设计与分析、模式识别、计算复杂性、信息检索、自然语言处理、数据挖掘

### 其他经历

## 哈工大AI俱乐部 - 成员

2017.12 - 2018.06

● 协助组织并参与AI相关技术与知识分享会

# 哈工大电脑110俱乐部 - 成员 技术部

2015.10 - 2018.06

• 积极参加社团组织的义务为学校师生免费处理电脑问题的活动

# 其他

• 证书: 高等教育教学证书 (HKU) 、大学生数学建模省级一等奖 (黑龙江)

- 语言: 英语 (CET-4: 514、CET-6: 455、TOEFL: 82)
- 活动荣誉: 学院60周年庆优秀志愿者、第15届WTO年会优秀志愿者、校迎新优秀志愿者
- 兴趣爱好: 网球、健身



# **Mengmeng Kuang**

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### **INTERNSHIP**

### Machine Intelligence and Translation Laboratory - Research Assistant

2018.05 - 2018.08

It belongs to the world's largest Natural Language Processing laboratory of HIT "Ministry of Education - Microsoft Language and Voice Key Laboratory".

- Responsible for the design and development of "medical information processing platform" and functional integration
  - Repository: https://github.com/kuangmeng/MedicalTextInfo
- Involved in the design and development of an offline trial recording system, which receives voice input and transfers to text at the same time.

### Harbin Richer Technology - R & D Engineer

2017.01 - 2017.04

A startups which relies on HIT Business Park. Its core products include stair climbing vehicle, surveillance systems. Its team won the first prize in the second season of a Science and Technology reality show "Armored Ambitious" holden by Zhejiang TV.

 Participated in the algorithm design and overall development of "detecting stairs", "adjusting direction and speed based on information of cargo weight and position" in the stair climbing vehicle project.

### **PROJECTS**

### Multiple Sequence Alignment based on Machine Learning

2018.09 - 2019.10

Repository: https://github.com/kuangmeng/MLProbs

- Select proper alignment strategy for the original protein sequences based on machine learning classification
  - Progressive Strategy: Calculate the posterior probability using HMMs, further calculate the distance between the sequences, then construct "Guide Tree", and finally align protein sequences from bottom to up
  - Non-Progressive Strategy: Align sequences based on the order of letters
- Perform a realignment process as post-processing after calculating "column scores" and identifying "Unreliable Regions" and "Real Reliable Regions", respectively

### **Cross-domain Chinese Word Segmentation**

2017.11 - 2018.06

Repository: https://github.com/kuangmeng/GraduationProject

- Achieve a core component by CRF and Viterbi algorithm, and accomplish N-gram algorithm and word production rules as a post processing process
- Integrate Named Entity Recognition module for different kinds of text, in order to achieve high accuracy in specific areas (Medicine, Law, Finance) text

**Resource Obtainer** 2016.12 - 2017.01

Component: SourceGet, Repository: https://github.com/HITAmigos/SourceGet

- Integrate voice search, voice reading, resource access of videos, musics, pictures and books
- Accomplish a multi-process and multi-threaded download system which also could call Thunder APP to download resources

Component: SourceOffer, Repository: https://github.com/HITAmigos/SourceOffer

• Achieve multithreaded web crawler, and store data in inverted index format for easy search

# **SKILLS**

- Frameworks: Structs 2 (Proficient), Scikit-Learn (Proficient), Keras / TensorFlow (Skilled)
- Development-related: Android (Master), Git (Proficient), MySQL (Master), RESTful (Master)
- **Programming Languages:** Java / Python / C/C++ (Proficient)

## **EDUCATION**

## The University of Hong Kong - M.Phil in Computer Science

2018.09 - 2020.07

- Honor: Full Postgraduate Scholarship
- Courses: Convex Optimization, Machine Learning, Deep Learning

# Harbin Institute of Technology - B.Eng in Computer Science and Technology

2014.09 - 2018.06

- GPA: 89.6 / 100 (rank: 23/226)
- Honors: National Motivational Scholarships (2014 2015, 2015 2016), Corporate Scholarship (2017 2018), People Scholarships
- Courses: Data Structure, Algorithm Design and Analysis, Pattern Recognition, Computational Complexity, Information Retrieval, Natural Language Processing, Data Mining

### **OTHER EXPERIENCE**

HIT AI club - Member

2017.12 - 2018.06

• Help organize and participate in AI-related technology and knowledge sharing sessions

# $HIT\ Computer\ 110\ Club\ -\ Member\ ,\ Technology$

2015.10 - 2018.06

Actively participate in community activities organized for teachers and students to solve computer processing problems freely

## **OTHERS**

- Certificate Certificate of Learning and Teaching in Higher Education, Provincial First Prize in Mathematical Modeling
- Languages: English (CET-4: 514, CET-6: 455, TOEFL: 82)
- Honors Outstanding Volunteer of College 60th Anniversary, Outstanding Volunteer of the 15th Annual Meeting of WTO
- Interests: Tennis, Cross Fitting