Tencent 腾讯

腾讯大数据在城市管理的应用

侯杰 腾讯研究院

2019年3月29日

演讲提纲

- 腾讯的产业互联网转型
- 腾讯在城市规划管理中的实践和思考

腾讯新一轮组织机构变革

以全新的架构扎根消费互联网，拥抱产业互联网，助力各行业数字化升级

以「互联网+」，构建连接一切的新生态

一个目标

成为各行各业的“数字化助手”

三种角色

连接器、工具箱、生态共建者

五个领域

民生政务、生活消费、生产服务
生命健康、生态环保

七种工具

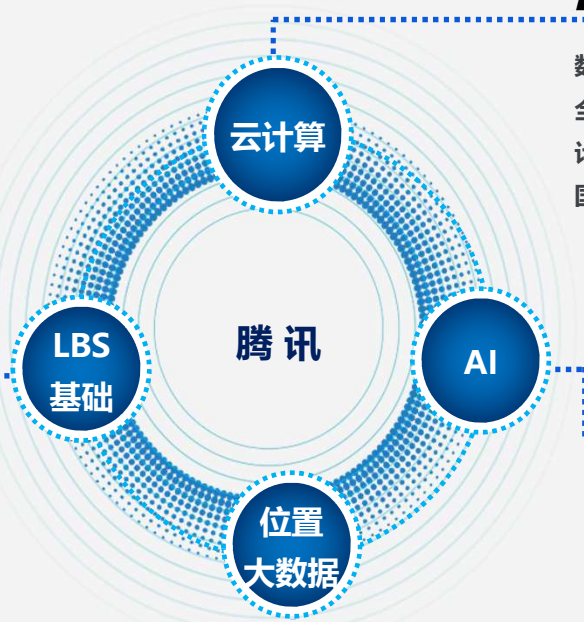
公众号、小程序、移动支付
社交广告、企业微信、大数据
云计算、人工智能、安全能力

同济大学建筑能源学术日

演讲提纲

- 腾讯的产业互联网转型
- 腾讯在城市规划管理中的实践和思考

城市规划管理方向的能力矩阵



LBS基础能力

基础数据：四维图新+HERE，众包采集
点：采用混合定位方式，90%定位精度<22.5米
线：全国328个城市，分钟级路况，ETA误差率<15.3%
面：6500万POI，日均60亿次检索类服务调用

用户发起主动定位：全球600亿次/天
月度活跃设备数：10.5亿
累计积累大数据量：4PB
最早可追溯时间：2014年3月

位置大数据能力

云计算

数据存储：累计**1000**PB，日增加**500**TB
全球分布：**5**大洲**18**大数据中心节点
计算能力：Sort Benchmark排序**全球第一**
国际认证：**ISO27001**,22301,20000等

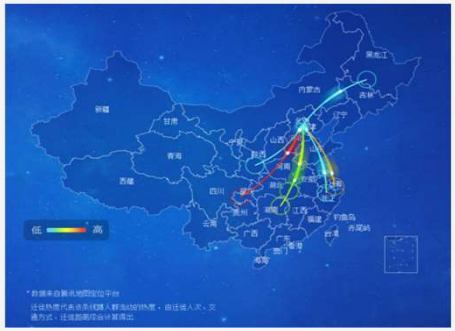
人工智能

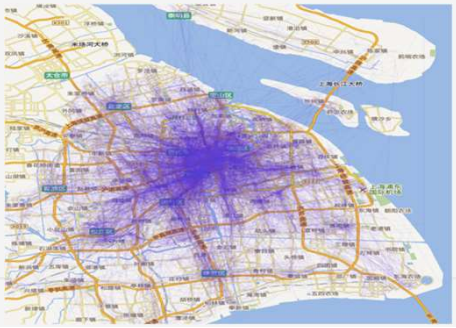
腾讯主张：科技向善
腾讯优势：最多的用户场景，丰富的训练集和海量算力
应用领域：医疗、教育、农业、环保、金融、游戏等
面临机遇挑战：仍处于初级阶段，需要下场，与产业融合

聚焦人地关系，以数定律，以流定形

迁徙

跨境和国内各级迁徙
都市圈和城市群的联系和界定



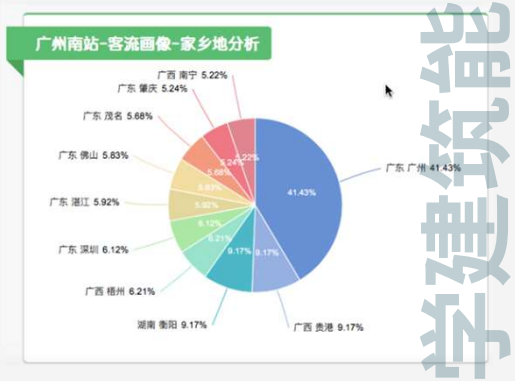


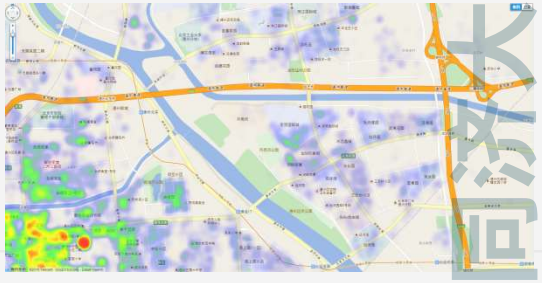
分布

三区三线的人口活动评估
自然资源和公共设施的利用率

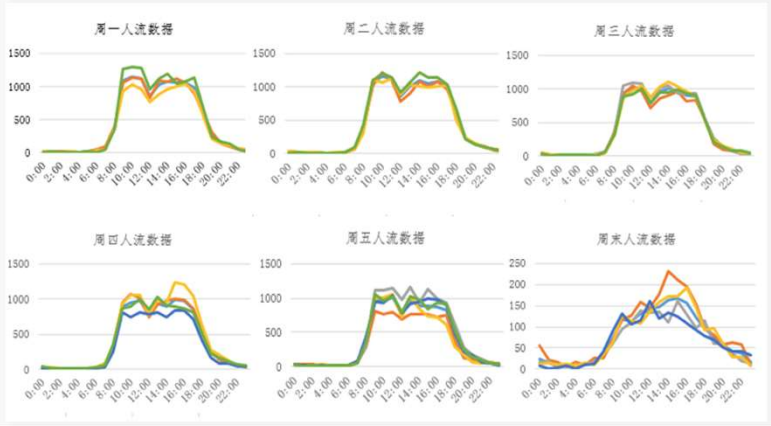
评价

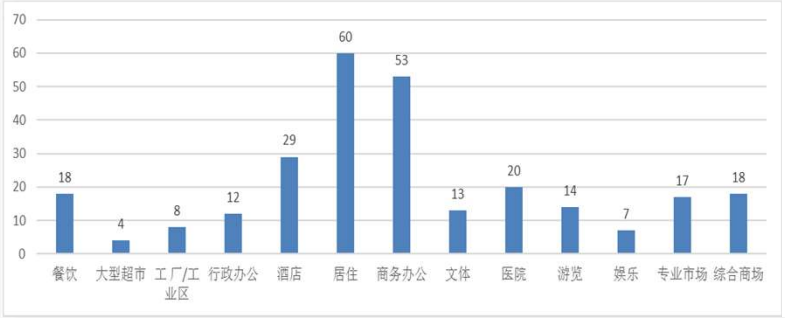
对人口和区域的画像
年龄/性别/消费/职住/家乡/常驻地





腾讯位置大数据，差异化优势在微观尺度





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Application of mobile positioning occupancy data for building energy simulation: An engineering case study

Zhihong Pang[a], Peng Xu[a,*], Zheng O'Neill[b], Jiefan Gu[a], Shunian Qiu[a], Xing Lu[c], Xin Li[d]

[a] College of Mechanical and Energy Engineering, Tongji University, Shanghai, 201804, China
[b] Department of Mechanical Engineering, The University of Alabama, Tuscaloosa, 35487, AL, USA
[c] Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder, Boulder, CO, USA
[d] Tencent Holdings Limited, Beijing, 100080, China

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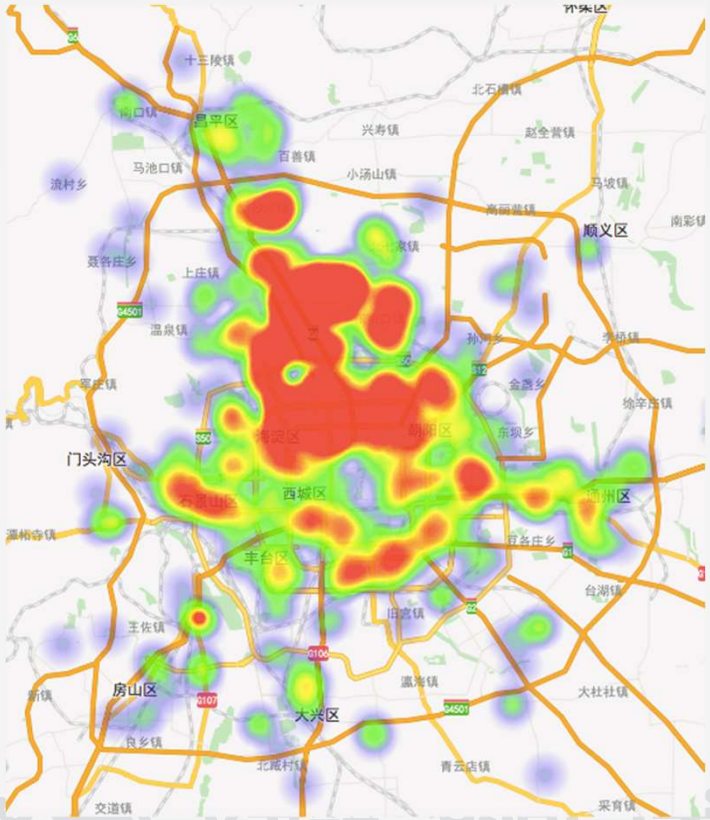
ABSTRACT

Occupancy data is a critical input parameter for building energy simulation since it has a big impact on the precision and accuracy of building energy model performance. However, current approaches to get such data through the conventional occupancy detection technology require either implementation of a large-scale sensor network and/or sophisticated and time-consuming computational algorithms, which to some degree limits the application of the real-time occupancy data for building energy simulation. In the era of the mobile internet, the massive people position data, which is generated by smartphone users and stored on cloud servers, offers a potential to solve this important problem. Such mobile data source is precisely monitored, real-time updated, and accessible with affordable time and labor cost upon customer's agreements in some regions, and therefore could be one of the alternatives to traditional occupancy detection methods.

This paper presents an investigation of whether and how the mobile-internet positioning data can benefit building energy simulation. This paper first summarizes the pros and cons of several mainstream occupancy detection methods. Then, the principle of the proposed mobile-internet-based occupancy detection method is introduced. The methodology of using such occupancy data for building energy simulation is developed. An energy performance model of a complex building in Shanghai with a whole building simulation software EnergyPlus is used as a pilot case study to demonstrate the effectiveness of the proposed methodology. A calibration is performed using the building automation system data and the mobile-internet-based occupancy data. The simulation results show that mobile-internet-based occupancy data can help improve the building model prediction accuracy.

超微观视角下的城市更新



遥感影像语义分割和地物识别（精度 92%,IOU 83%）

Thanks

侯杰

13370164193

jeffhou@tencent.com