



THE UNIVERSITY OF HONG KONG 香港大學  
**faculty of architecture** 建築學院

Department of Urban Planning and Design  
城市規劃及設計系

Centre of Urban Studies and Urban Planning  
城市研究及城市規劃中心



# M.Sc. in Urban Analytics (MUA)

Dr. MA, Jun

Admission Talk



# Master of Science in Urban Analytics

- Program objective
  - Equip **urban professionals** with **cutting-edge analytics** and modeling skills
- Mode
  - One year full time
- Deadline: **2 January 2024 at 12:00 noon (GMT +8)**
- Link:
  - <https://aal.hku.hk/tpg/programme/master-science-urban-analytics>



# Reasons to join MUA

- Learn advanced knowledge

- Artificial intelligence
- Data Analytics
- GIS
- BIM, CIM
- Point Cloud

- Become a member of RTPI

- "specialist" accreditation from the Royal Town Planning Institute (RTPI).
- Graduates could become members of RTPI under the Associate Route.

- UGC Fellowship

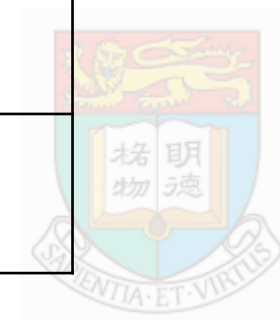
- HK\$120,000 for each awardee, local
- The one and only program in FoA
- Application Link: [https://hku.au1.qualtrics.com/jfe/form/SV\\_23sXVeavaDv8m90](https://hku.au1.qualtrics.com/jfe/form/SV_23sXVeavaDv8m90)





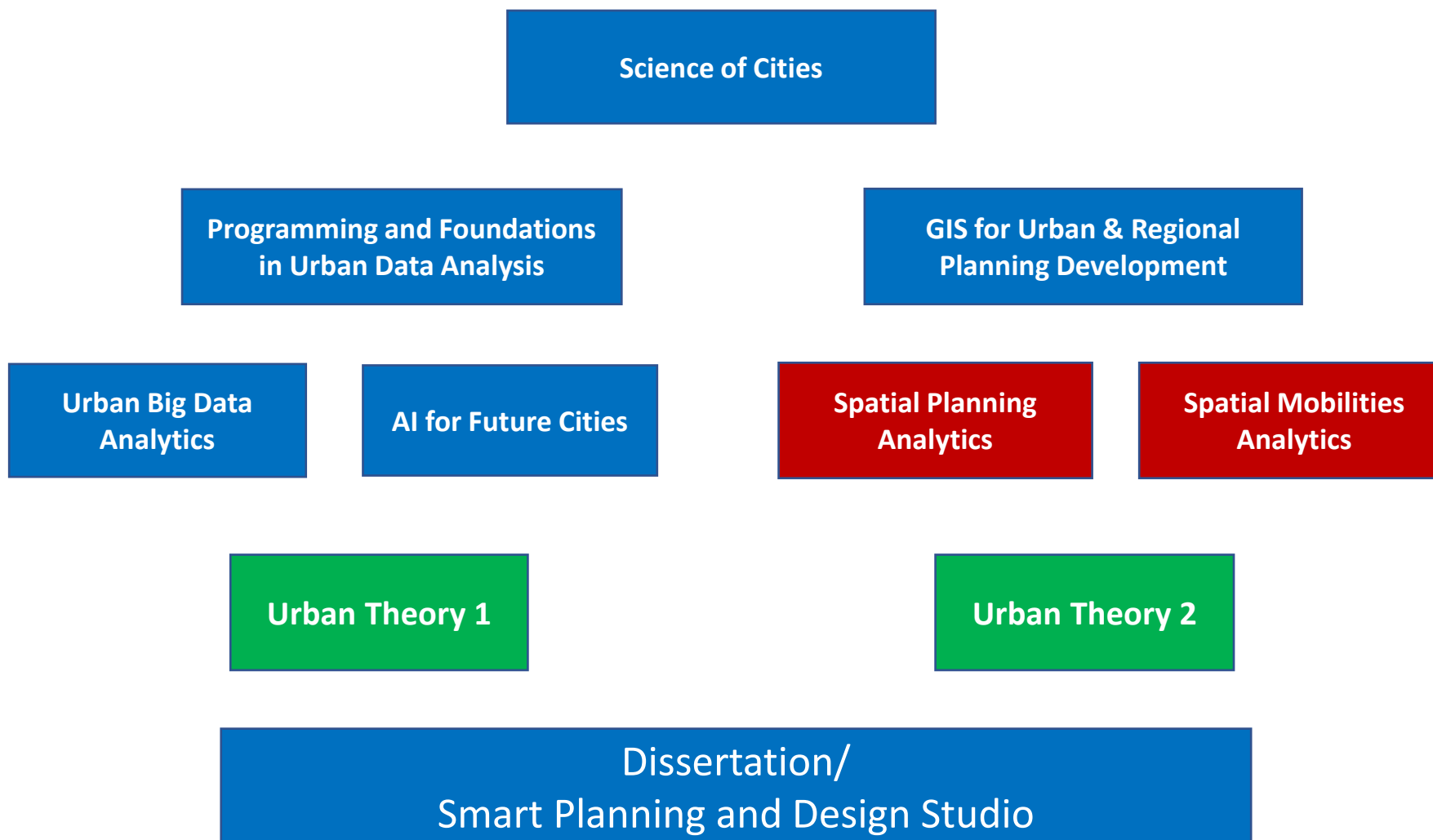
# Curriculum

<b>Analytics</b> (Seven urban analytics courses)	<ul style="list-style-type: none"><li>• Programming and Foundations in Urban Data Analysis(6 credits)</li><li>• Geographic Information System for Urban and Regional Planning and Development (6 credits)</li><li>• Urban Big Data Analytics (6 credits)</li><li>• AI for Future Cities (6 credits)</li><li>• Spatial Mobilities Analytics (6 credits)</li><li>• Public Space Design Analytics (6 credits)</li><li>• Science of Cities (6 credits)</li></ul>
<b>Theories</b> (Choose two from a pre-determined list; Options for advanced standing)	<ul style="list-style-type: none"><li>• Urban Development Theories(6 credits)</li><li>• Planning Practice, Law and Ethics in Hong Kong (6 credits)</li><li>• Values of Urban Design (6 credits)</li><li>• Morphologies and Urban Design Theories (6 credits)</li><li>• International Planning Policy and Practice (6 credits)</li><li>• Transitional Cities (6 credits)</li></ul>
<b>Capstone</b> (Choose one)	<ul style="list-style-type: none"><li>• Dissertation (15 credits) <b>or</b></li><li>• Smart Planning and Design Studio (15 credits)</li></ul>





# Curriculum Structure





# Curriculum Structure (Full Time)

## 1<sup>st</sup> Semester

Science of Cities

Programming and Foundations  
in Urban Data Analysis

GIS for Urban & Regional  
Planning Development

Spatial Planning Analytics

Urban Theory 1

6 x 5 = 30 credits

## 2<sup>nd</sup> Semester

Urban Big Data Analytics

AI for Future Cities

Spatial Mobility Analytics

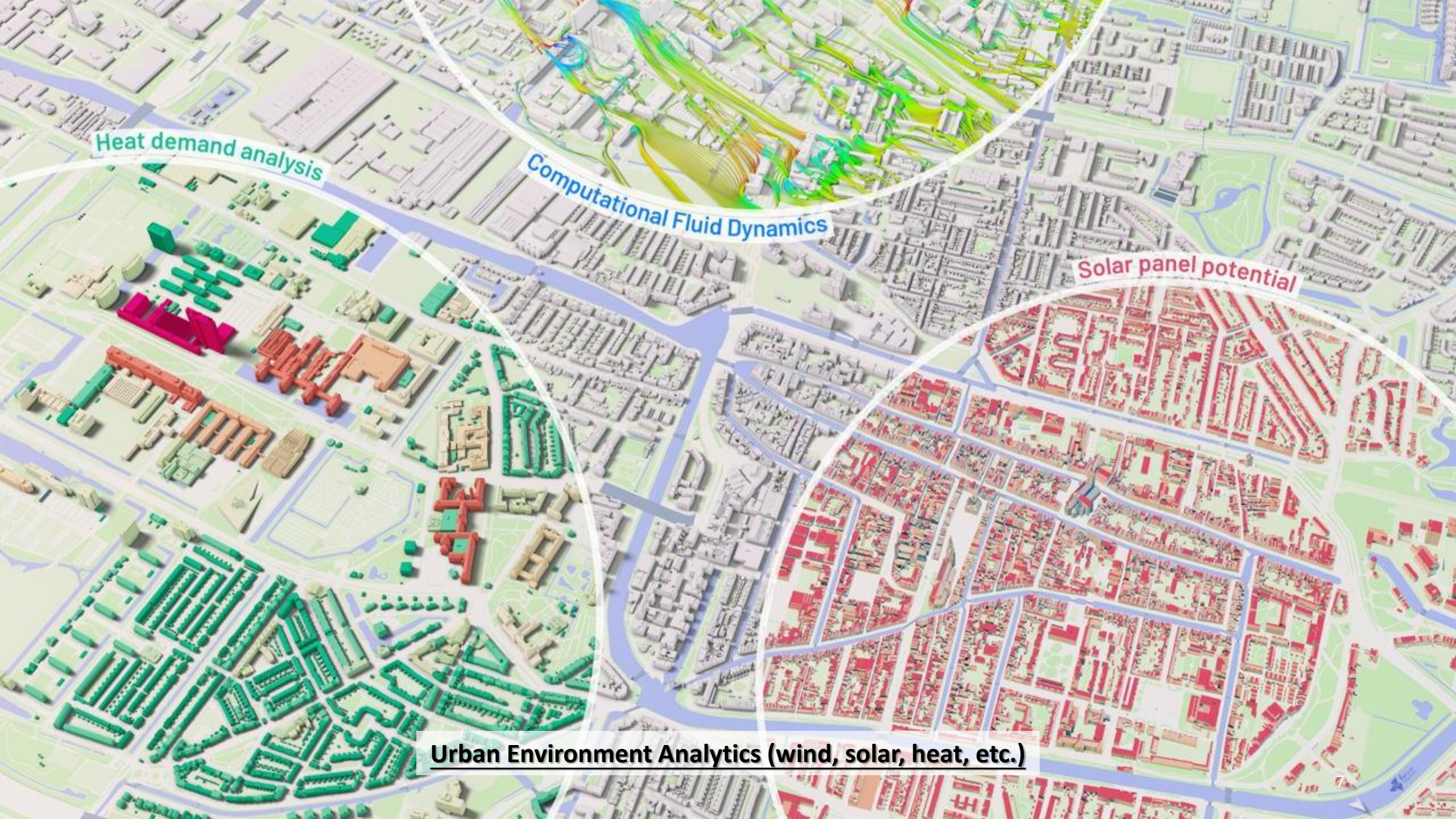
Urban Theory 2

Dissertation/  
Smart Planning and Design Studio

6 x 4 + 15 = 39 credits







Heat demand analysis

Computational Fluid Dynamics

Solar panel potential

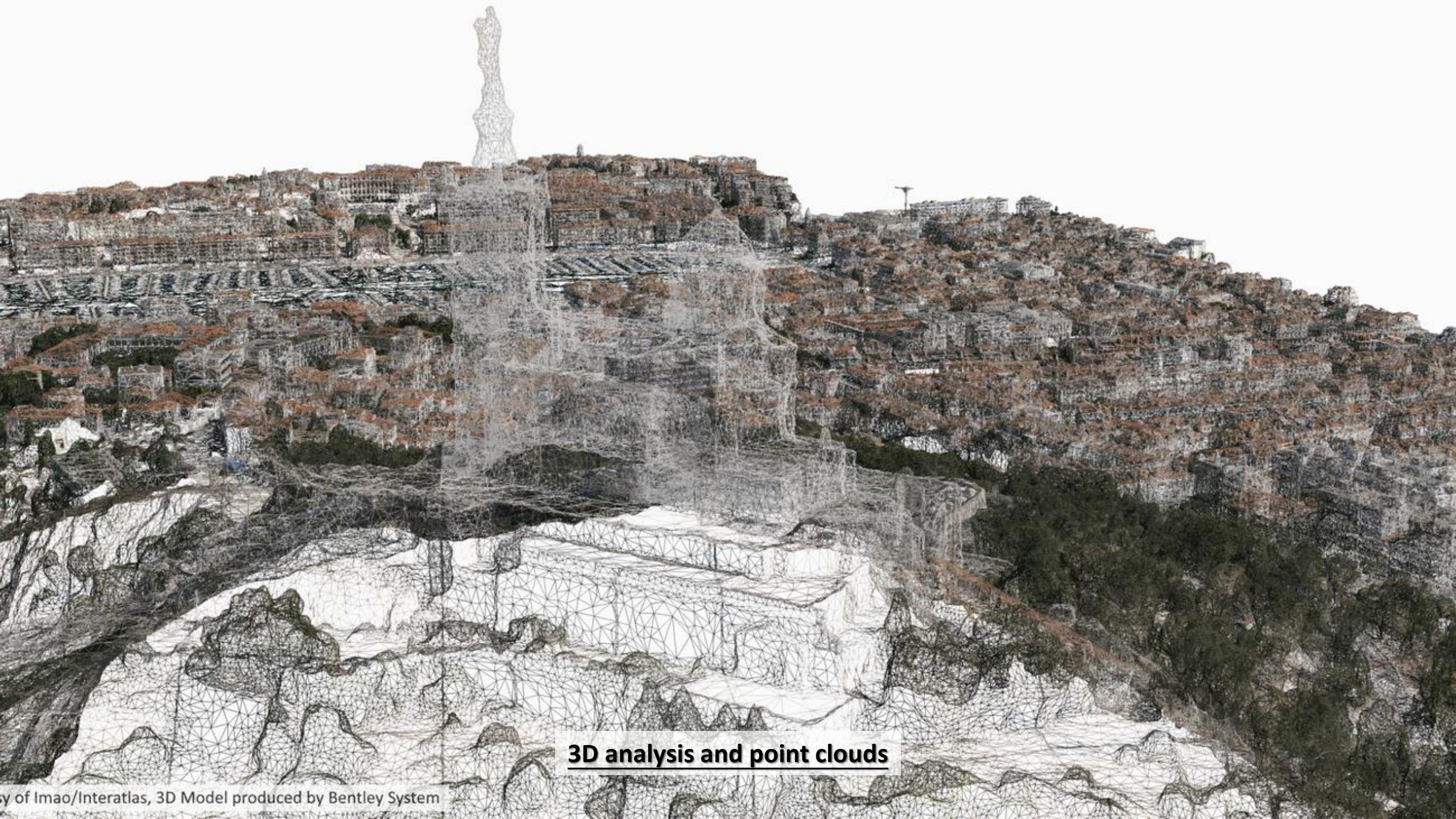
Urban Environment Analytics (wind, solar, heat, etc.)





Computer Vision





### 3D analysis and point clouds





Self driving Car



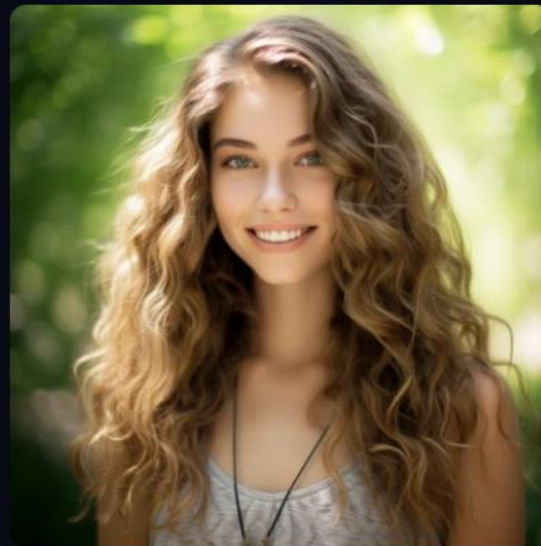
MJ



# Community Showcase

Recent

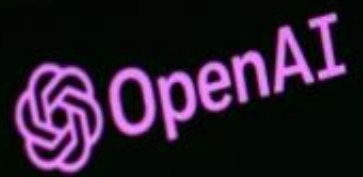
Top



Generative AI







# ChatGPT: Optimizing Language Models for Dialogue

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for GPT to answer followup questions, admit its mistakes, correct premises, and reject inappropriate ones. A sibling model to InstructGPT, which is trained in a different way and provide a

Large Language Models



It's 2023, you should learn urban analytics.

# Jobs in these 10 industries will grow most in demand in 2022, from 'behavioral health' to cybersecurity



Enrique Fernández and Nathan Rennolds, Business Insider España Mar 1, 2022, 10:55 PM



## 1. Artificial intelligence specialist

As LinkedIn's [Emerging Jobs Report](#) revealed, in the US, hiring growth in this job has increased 74% over four years.



SPONSORED CONTENT by Schneider Electric

**Sustainability is fast becoming an expected part of doing business. Here's how Schneider Electric is leading by example.**

This role is seeing growth across all industries and this looks set to continue into 2022.

Artificial intelligence specialists work in a variety of industries but with skills focused on computer programming and IT.

The work consists of developing new AI-based products and improving existing ones.

## 2. Data Scientist



# 2021年 中国新兴职位趋势报告

China's Jobs on the Rise in 2021

探索关键趋势



中国是2020年全球唯一实现正增长的主要经济体。根据政府发布的数据，2020年中国实际GDP增长 2.3%。作为第一个遭受COVID-19冲击以及第一个遏制其蔓延的国家，中国以极有韧性的疫后消费复苏，为其他国家树立了榜样。

在此期间，**78%**的餐饮企业营收损失超过**100%**，在线教育行业市场规模同比增长**35.5%**……从零售餐饮、住宿旅游、交通运输、文化娱乐等行业营收大幅下滑，到远程办公、在线教育、在线医疗、生鲜物流等科技公司的异军突起，再到各行各业的全面复工复产，COVID-19给中国各行业都带来了不同程度的挑战和机遇，而这些变化可能会深刻影响到行业未来发展趋势和竞争格局。

那么，在“新常态”下，什么样的职位需求蓬勃兴起？这些职位所需的技能是什么？

在领英数据洞察中，可以找到答案——我们将它们汇编为领英《**2021 年新兴职位趋势报告**》。该报告仔细研究了COVID-19影响下中国瞬息万变的职场，将2020年3月1日至2021年2月28日与上一年同期相比增长最快的职位进行了比较，并总结了正在兴起的技能需求。

报告发现：

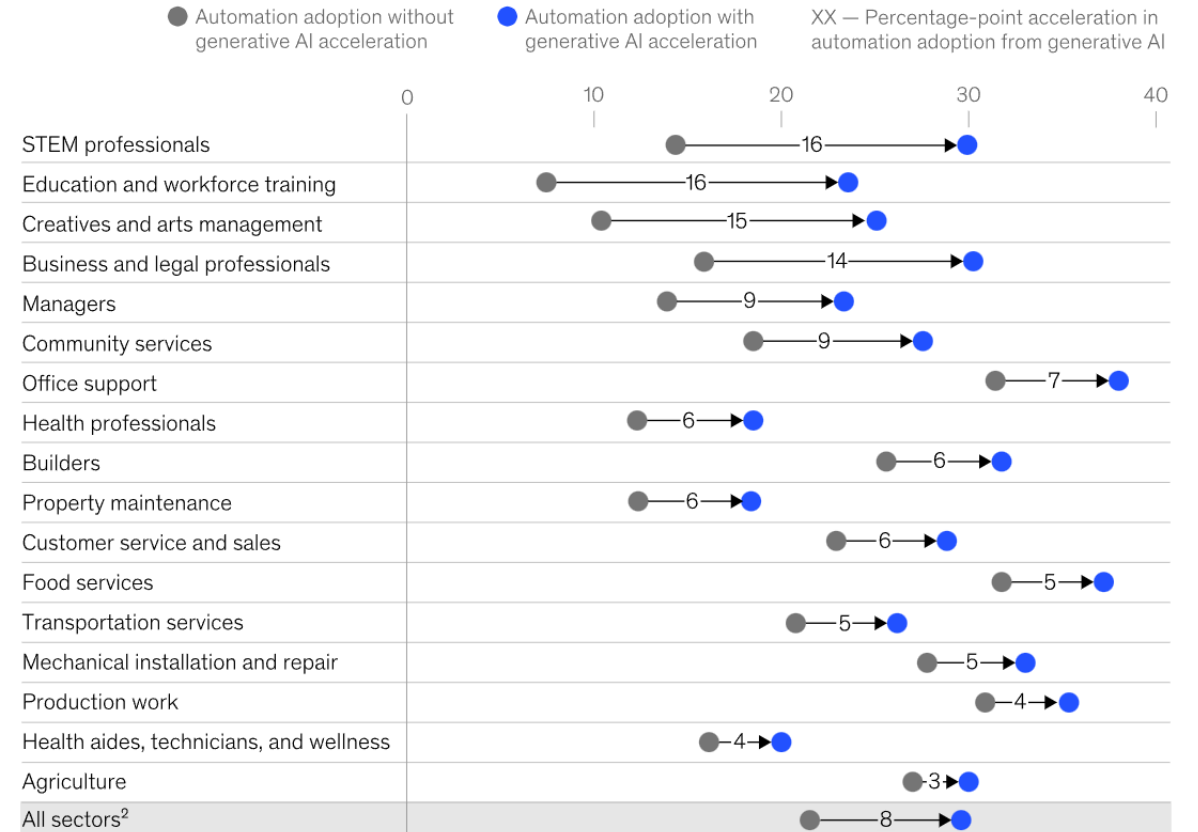
1. 电子商务、社交媒体 / 数字营销、内容营销、软件开发等自带数字化基因的原生职位需求增长迅速，成为备受青睐的“潮流职位”。
2. 大健康、专业工程学、法律 / 法务、金融财务等职位更多依赖于人才的硬核专业技能。
3. 数据分析能力成为众多职位必备的职业技能；“专业技能 + 数字化技能”的复合型人才将在职场中大受欢迎。
4. 运营和供应链、电子商务、内容营销、法律 / 法务、金融财务、人力资源、社交媒体 / 数字营销职位对学生群体相对友好。

Domain Expertise + Data Science is trending in China



**With generative AI added to the picture, 30 percent of hours worked today could be automated by 2030.**

**Midpoint automation adoption<sup>1</sup> by 2030 as a share of time spent on work activities, US, %**



<sup>1</sup>Midpoint automation adoption is the average of early and late automation adoption scenarios as referenced in *The economic potential of generative AI: The next productivity frontier*, McKinsey & Company, June 2023.

<sup>2</sup>Totals are weighted by 2022 employment in each occupation.

Source: O\*NET; US Bureau of Labor Statistics; McKinsey Global Institute analysis



# Master of Science in Urban Analytics (MUA)

- Equip urban planners/surveyors with **novel urban science and analytics** in planning and managing the development of cities.
- Designed for multi background students (no coding/statistic/GIS background required)
- **Advantages over the programs in Engineering:**
  - Specifically designed for urban designers/planners/surveyors
  - Designed for multi background students (**no coding/statistic/GIS background required, start from scratch**)
  - Emphasize the integration of urban science and advanced technologies







# Student Achievements

- **2023 Esri Young Scholars Award**
  - 2nd runner up
- **the Open Category of the Common Spatial Data Infrastructure (CSDI) Awards 2023**
  - the Champion (MUA 22/23)
  - 1st Runner Up (MUA 21/22)
  - 2nd Runner Up (MUA 22/23)
- **2023 Baidu Large Language Model Application Innovation Challenge**
  - First Prize (MUA 22/23)

## 2023大模型应用创新挑战赛

AI 赋能 智见未来



# Careers



Majority of the graduates are working in **planning and design** institute/company/organizations in HK and Mainland China



Another group of students find **urban analytics/data scientist jobs** in world leading finance and internet companies





# Undeniable Reasons to join MUA

- More competitive/interdisciplinary in the job market (AI, GIS, Data, etc.)
- Fellowships





# Embrace the future. Apply MUA!

Deadline: January 2, 2024