

GIS 研究生留学选择：中国学生视角

Choosing GIS graduate programs from afar: Chinese students' perspectives

王亦康

yikang.wang.21@ucl.ac.uk





Education Background

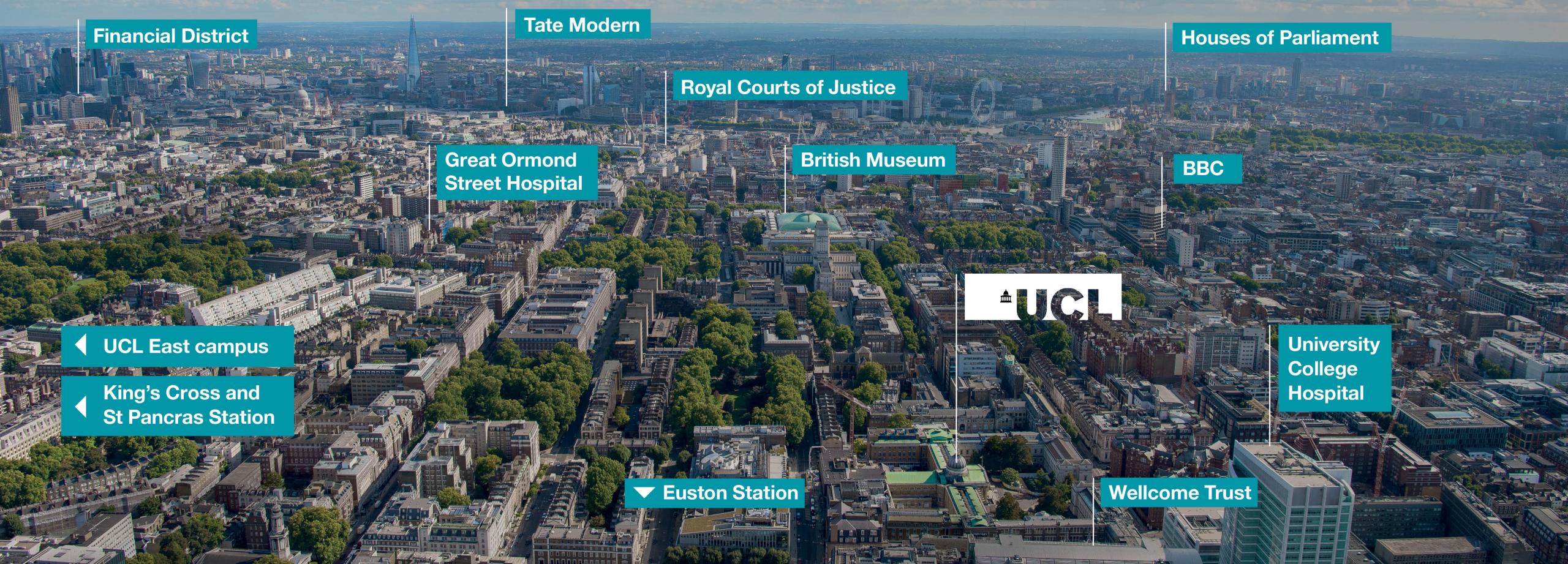
- 2021 – 2025 | University College London (UCL)
 - PhD at Centre for Advanced Spatial Analysis (CASA)
 - Supervised by Dr Chen Zhong and Prof Michael Batty
 - Research on Human Mobility, Spatial Causal Inference, and Urban Inequality
- 2020 – 2021 | Imperial College London
 - MSc in Applied Computational Science and Engineering
 - Master Thesis: Multi-sensor fusion navigation for robots
- 2017 – 2020 | Wuhan University
 - BEng in Geodesy and Geomatics Engineering (GIS branch)



Imperial College
London



Our community sits at the heart of one of the world's most dynamic cities.





There are three major units at UCL that operate GIS-related research:

1) The Bartlett Centre for Advanced Spatial Analysis (CASA)

- Focuses on urban studies, complex systems, visualization, and multi-intelligent systems

2) Civil, Environmental and Geomatic Engineering (CEGE)

- Focuses on spatio-temporal data mining, GeoAI, 3D GIS, navigation, BIM

3) Department of Geography

- Focuses on demographics, consumer data analysis/spatial analysis, and remote sensing



- Centre for Advanced Spatial Analysis (CASA) 由 Michael Batty 创立于1995年，旨在利用建模和数据科学、城市环境感知、可视化和计算方面的方法和理念，引领城市科学的发展
- CASA 联系紧密但跨学科性很强，研究者包括物理学家、规划师、地理学家、经济学家、数据科学家、建筑师、数学家和计算机科学家
- 我们的研究涉及多个尺度：从低功率传感器到卫星遥感
- 开设3个硕士课程：
 - Urban Spatial Science MSc (Master of Science)
 - Urban Spatial Science Mres (Master of Research)
 - Connected Environments MSc
- 欢迎硕士、博士、联合培养博士、博后和访问学者





Urban Mobility Group

- 1名PI: 钟晨老师
- 1名访问学者
- 3名博士后
- 5名博士生

来自7个国家

多元背景: GIS, 自然地理, 土木工程, 海洋科学, 环境政策, 软件工程, 数学.....



Human location data

- individual level sensors data.
e.g., travel card data, social media data, mobile phone data...



Computational methods

- spatial analysis, machine learning, (explainable) GeoAI, causal inference, urban models...



Urban contexts

- London, Shenzhen, Nairobi, Singapore, Beijing...
- transport and land use development, e.g., urban spatial structure, segregation, accessibility, inequality ...

Redefining Variability: EvALuating Land Use and TRansport Impacts on Urban Mobility PatternS (**realTRIPS**)
Website: smartcityanalysis.com



My PhD research





Achieving Energy Demand Reductions through Integrated Energy Demand Models for Transport and Residential Sector

[View on GitHub](#)

Achieving Energy Demand Reductions through Integrated Energy Demand Models for Transport and Residential Sector

Project ID: 2228cd1256 (You will need this ID for your application)

Research Theme: Energy and Decarbonisation

UCL Lead department: Centre for Advanced Spatial Analysis (CASA)

[Department Website](#)

Lead Supervisor: Chen Zhong

<https://ucl-epsrc-dtp.github.io/2024-25-project-catalogue/projects/2228cd1256.html>

我的博士申请经历：GISphere的帮助



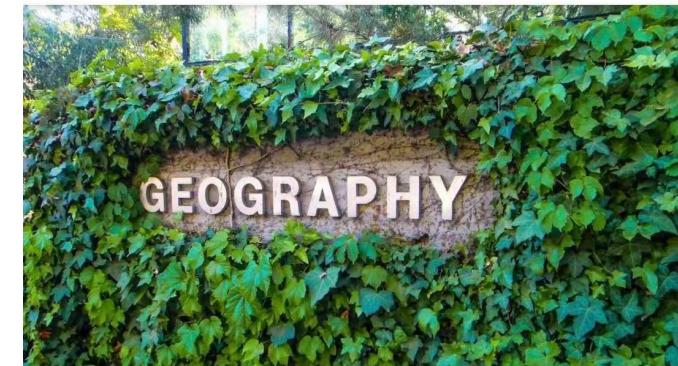


- 始于2019年9月，采取众包的形式获取留学信息，覆盖约35所学校
 - GIS留学：学校与项目指南 - 康雨豪的文章 - 知乎
<https://zhuanlan.zhihu.com/p/82774812>
 - 2020版GIS留学院校指南 - 康雨豪的文章 - 知乎
<https://zhuanlan.zhihu.com/p/254826817>
- 项目初衷
 - 为GIS专业学弟学妹的出国选校提供帮助和支持
- 早期创始人
 - 康雨豪*, 叶山, 叶翔*, 饶锦蒙*, 赵群山*, 李肖



* 武大校友

zhuanlan.zhihu.com/p/82774812



康雨豪
威斯康星大学麦迪逊分校 地理学博士在读

GIS留学：学校与项目指南

9 天前 · 来自专栏 地理空间数据科学

这是一篇全新（2019年9月）且较为详实全面（目前收录三大洲34所学校）的GIS出国留学选校总结帖，作者来自于世界各地名校GIS专业，均为在读或已经毕业的学生，或年轻助理教授，主要围绕学校和导师提供第一手的信息。因为无法联系到所有包括GIS相关学校的华人朋友参与众包贡献，本文仅供参考，欢迎补充更新，更全面的信息也可以关注[AAG Geography Program](#)。同时希望这篇文章能为后来者铺路，为GIS专业的学弟学妹出国选校提供帮助和支持。

183

45条评论





2020版网址 <https://gis-info.github.io>

斯图加特大学

University of Stuttgart (Stuttgart)

德国，巴登-符腾堡州，斯图加特市

GIS相关系所：[摄影测量研究所](#), [斯图加特工程大地测量研究所](#), [测地所](#)。

斯图加特大学以工科著名，是德国理工大学九校联盟TU9成员之一，在其跨学科联合体 Faculty 6 中下设多个航空，空间和大地测量学领域的相关系所，涉及到GIS相关研究的导师主要集中在摄影测量研究所 (IPF) , 大地测量研究所 (IIGS) 和测地所 (GIS) 。斯图加特大学较为出名的还有[GEOENGINE](#)的两年期硕士项目，英语授课，内容覆盖测绘，定位，导航，地图制图等。

相关导师：

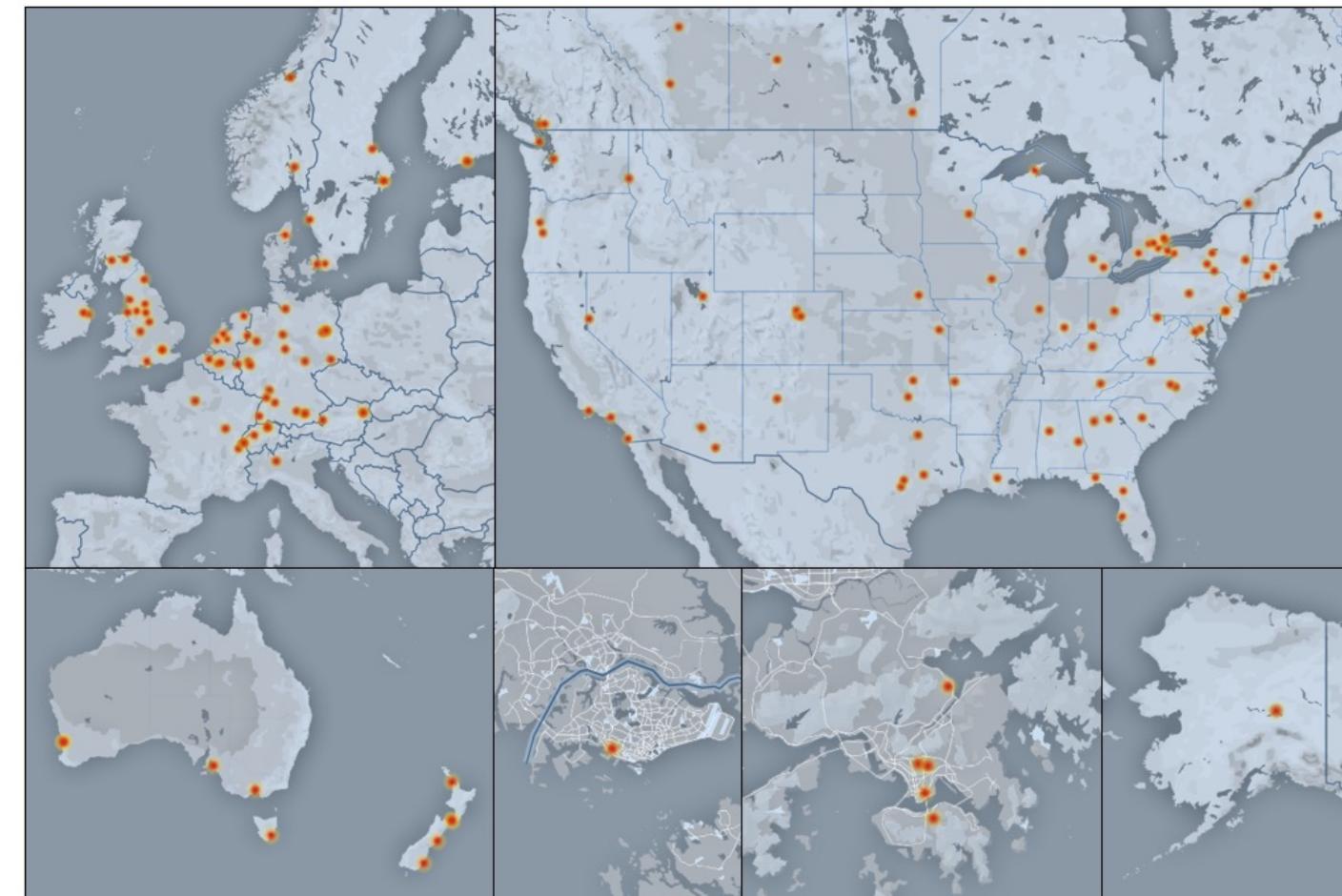
院校介绍

老师介绍

- [Volker Schwieger](#): remote sensing, SAR, 3D construction;
- [Volker Walter](#): automatic map retrieval in the Internet, generalization of 2D and 3D data, conflation of spatial data;
- [Nico Sneeuw](#): geodesy and surveying, hydrology, oceanography, spatial analysis, climate change, geomatics, harmonics, earth observation, earth sciences.

更统一的格式
扩展到了四大洲约180所学校

Logo/图片来源: by叶山





GISphere团队历史：创建GISphere公众号



最初的目的：

创建一个论坛，分享留学信息，同时代替We站的
资料整理功能

留学申请 | 20 Fall ETH Geomatics
申请分享

原创 GIS留学指南 GISphere留学指南

2020-11-30 07:00

作者背景

- 学校：武汉大学
- 专业：地理信息科学
- GPA：3.81
- TOEFL：102
- GRE：317+3.5

2020.11.30 第一篇推送
作者ETH硕士生岳远熹

< ⌂ ...

 **GISphere 留学指南 ★**
美国

为广大师生提供及时且全面的GIS招生留学信息、会议讲座信息和论文投稿信息。>

276篇原创内容
视频号: GISalon圆桌会
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2023.12, 3年后
超过300篇推送, 12,000+粉丝



2020年10月的聊天记录





一年一度问卷收集中，各位小伙伴们给我们提了很多建议，其中不少同学提到了线上分享的点子

没有，维持现状；可以通过zoom或腾讯会议开圆桌会

可以做一些线上的分享会
比如GIS职业规划~

可以做Zoom meeting交流学长学姐回答问题

建议可以定期开展线上交流活动

2021.10 圆桌会议
第一期开始筹办



2021.11 圆桌会议
第一期顺利开展

GISphere | GISalon 第一期
2022申请迎新季

腾讯会议号: 647660531
① 2021年11月7日 星期日
北京时间 9 - 10 pm · 伦敦时间 1 - 2 pm · 纽约时间 8 - 9 am

01 关于沙龙

周日11月7日晚9点，欢迎大家一起来参与GISalon线上圆桌会议，与本期嘉宾们共同讨论申请季经常会遇到的问题，分享观点与经验，提前为改变做好准备！

02 本期话题

- 如何找到潜在的导师？
- 如何对感兴趣的导师套磁？
- 如何准备Master/Ph.D的面试？
- 如何撰写个人陈述 (Personal Statement)？
- 如何确定自己是否适合读博？

03 本期嘉宾

康雨豪	威斯康辛大学麦迪逊分校 GIS
刘年华	欧盟伊拉斯谟 GIS
廖倩儒	马里兰大学 生态学
王皓筠	麦克马斯特大学 地理学、城市规划
王亦康	伦敦大学学院 GIS
叶山	威斯康辛大学麦迪逊分校 地球科学
周珍琦	纽约州立大学布法罗分校 地理学、风景园林

会议二维码

GISphere公众号

联系方式
邮箱: gisphere@outlook.com

GISphere留学指南



- GISalon圆桌会已经举办 23 期中文版，3 期英文版
- 在 Bilibili 发布 163 个视频，播放量 388,000+，粉丝数 15,000+



【硕博招生要求】名校教授如何选学生？基础？热爱？性格？成果？
3.4万 2022-5-17



若重回读博/申博前，想对自己说...
1.9万 7-9



【硕博招生】导师揭秘招生中最喜欢的学生品质是...快来对号入座！
1.7万 2022-12-10



【硕博科研论文选题】优秀的论文选题是什么样的？
1.5万 2022-3-13

GISphere GISalon Webinar Series Advanced GIS Careers Ep. 03

Recruiting and Mentoring Graduate Students in GI Science and Cartography

Time: December 11, 2023 10-11am (EST), 11pm-12am (Beijing), 3-4pm (London)
Venue: <http://zoom.us/my/gisalon>

Panelists:

- Dr. Kathleen Stewart**
Professor, University of Maryland
- Dr. Angela Yao**
Professor, University of Georgia
- Dr. Caglar Koylu**
Associate Professor, University of Iowa
- Dr. Junghwan Kim**
Assistant Professor, Virginia Tech

Highlights:

What qualifications (e.g., research fit, academic achievements, GPA, etc.) do professors value the most for students? What will make students stand out in the application pool?

How do professors help students find their research interests and develop their own work? What will help students stay motivated when they experience common struggles such as imposter syndrome, procrastination, and unsuccessful research experiences?

What different expectations or considerations do professors have when selecting and advising international students? Do professors find any struggles particularly for international students?

Hosts:

- Hoeyun Kwon**
Postdoc, University of Colorado Boulder
- Armita Kar**
Postdoc, The Ohio State University

Sponsors:

- AAG (American Association of Geographers)
- CAGIS (Geographic Information Science Consortium)

Contact Us: gisphere@outlook.com

我看到嘉宾名单

我都惊了

哈哈哈哈哈哈

听听他们到底想要什么

四位老师我投了三个



【博士阶段规划】名校教授手把手教你学术规划！热点？成果？人
1.4万 2022-5-19



【硕博招生要求】北大博士&明尼苏达教授 | 深度剖析很重要
1.3万 2022-5-17



从博士到博后：既是挑战也是转变
1.2万 7-15



【博士招生要求】剑桥博士&伦敦国王学院教授 | 沉稳、务实、包容、
1.2万 2022-5-29



计算机和金融适合你吗？全面剖析利弊！哈佛/MIT/哈工大/武大硕博
9156 2022-6-22



【博士申请】最重要的申请材料居然是...！！！GPA？推荐信？出版
8249 2022-10-16



科研路上如何调整心态？名校教授们分享压力管理方法~ 斯坦福博后，
7165 2022-5-23



【硕博招生要求】斯坦福博后&港大教授 | 研究热情最重要
7145 2022-5-17

2023.12.11
第3期英文圆桌



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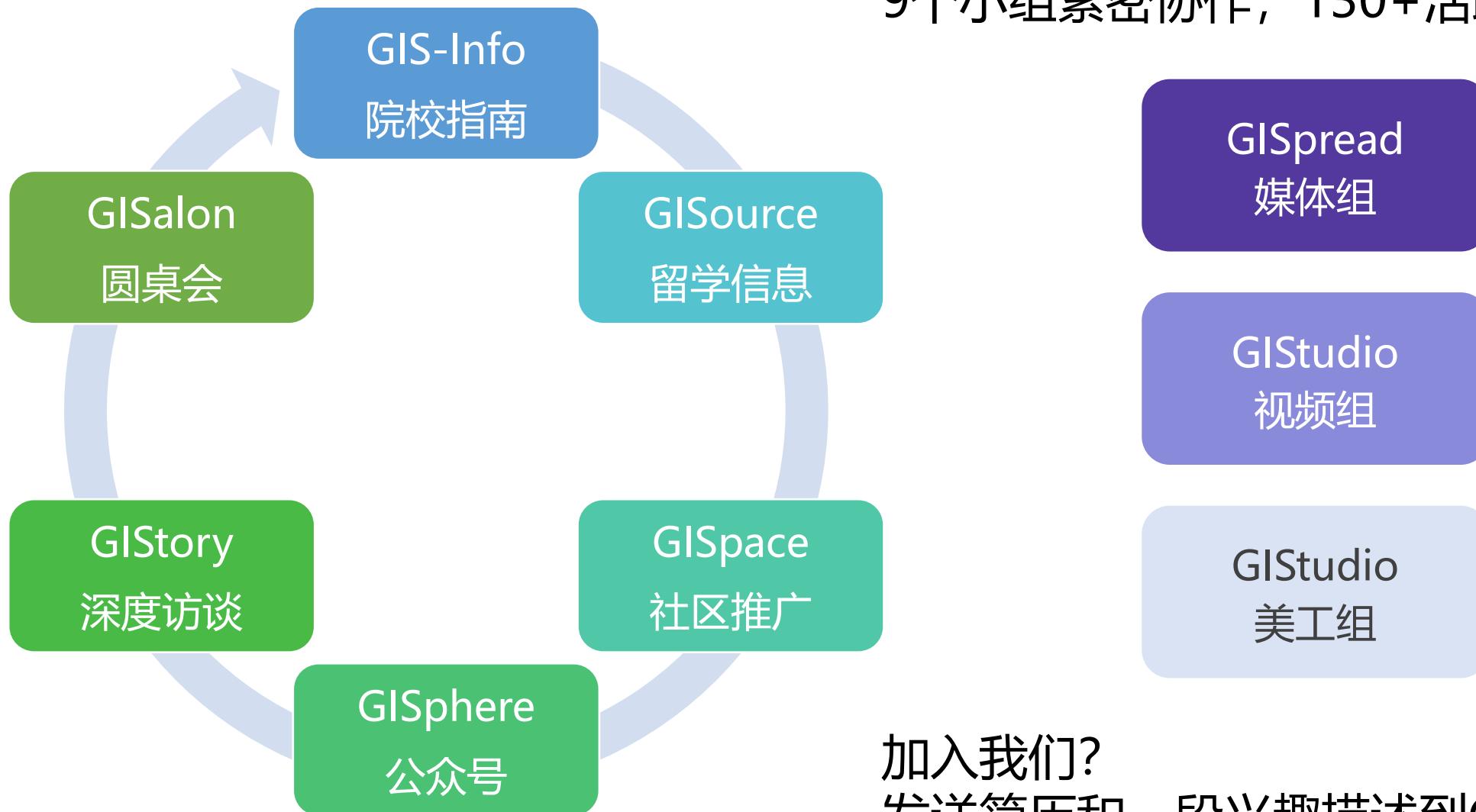


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RESEARCH ARTICLE

Transactions
in GIS  WILEY

Choosing GIS graduate programs from afar: Chinese students' perspectives

Yikang Wang^{1,2}  | Yuhao Kang^{2,3}  | Haokun Liu^{2,4}  |
Ce Hou^{1,2,5}  | Bing Zhou^{2,6}  | Shan Ye^{2,7}  | Yuyan Liu^{2,8}  |
Jinmeng Rao^{2,3}  | Zhenghao Pei^{2,9}  | Xiang Ye^{10,11}  | Song Gao³ 

¹Centre for Advanced Spatial Analysis, University College London, London, UK

²The GISphere Project, Madison, Wisconsin, USA

³GeoDS Lab, Department of Geography, University of Wisconsin-Madison, Madison, Wisconsin, USA

⁴Institute of Geography, University of Bern, Bern, Switzerland

⁵Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology, Hong Kong, China

⁶Department of Geography, Texas A&M University, College Station, Texas, USA

⁷Department of Geoscience, University of Wisconsin-Madison, Madison, Wisconsin, USA

⁸Department of Geography, National University of Singapore, Singapore, Singapore

⁹Department of Geography & Geographic Information Science, University of Illinois Urbana-Champaign, Urbana, Illinois, USA

¹⁰Research Institute for Smart Cities, Shenzhen University, Shenzhen, China

¹¹School of Architecture and Urban Planning, Shenzhen University, Shenzhen, China



Research Questions

1

What are the **patterns** of Chinese GIS students applying for overseas GIS programs?

2

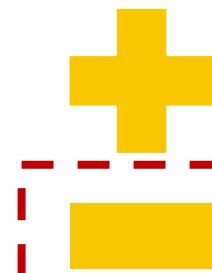
What are the **factors** influencing Chinese GIS students' choices of overseas GIS programs?

3

What **insights** can be inferred for future GIS and geography program development?



Pull-push Model



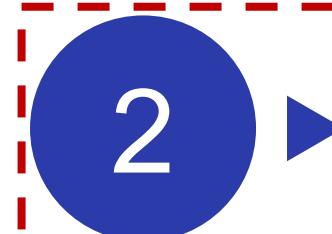
Push factors are factors that encourage students to leave their home countries and study abroad

Pull factors are factors that are advantages in study destinations

Three-phase Model



Determining whether to go abroad or continue their studies in their home country

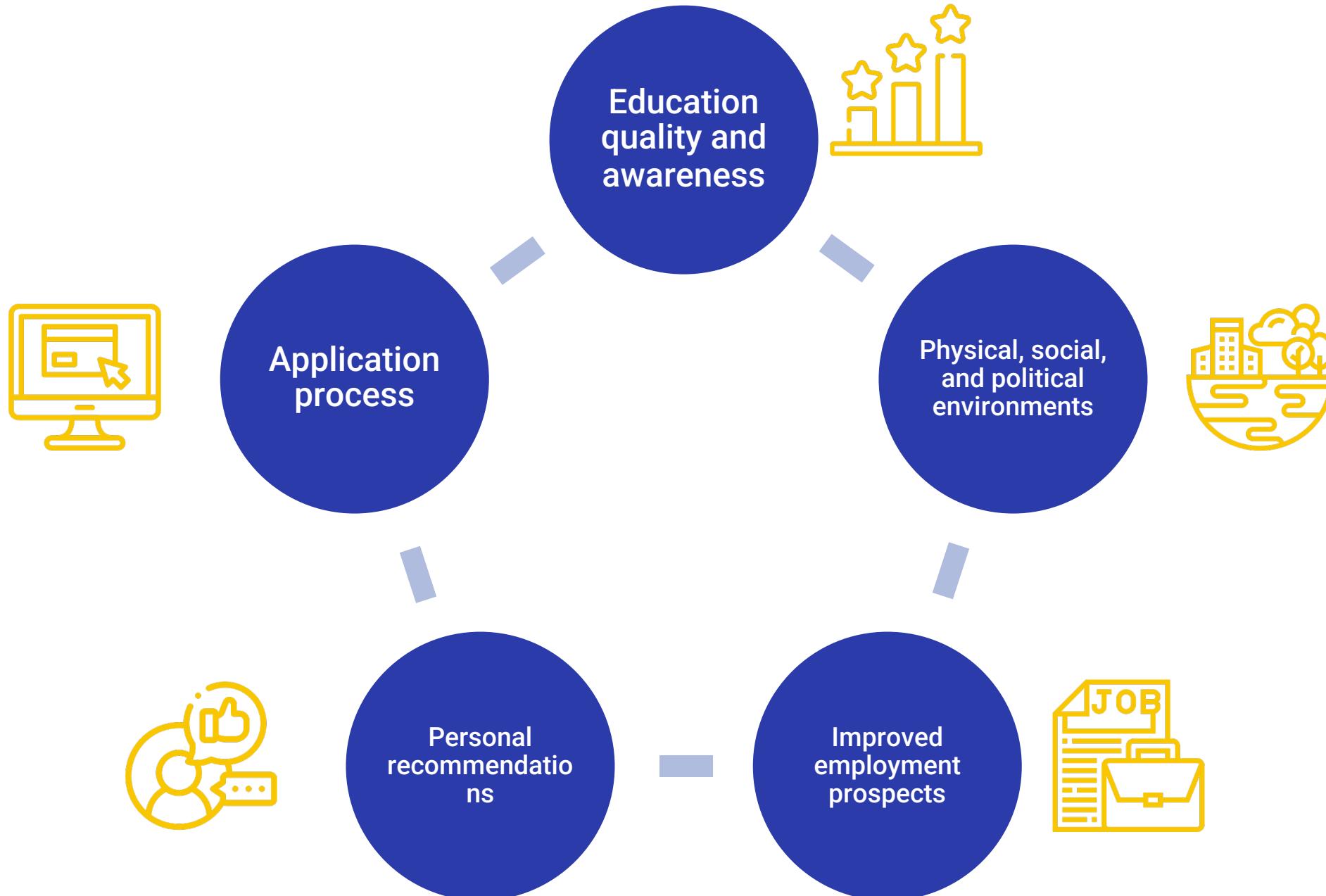


Selecting a destination country



Choosing a higher education institution

Five Categories of Influencing Factors





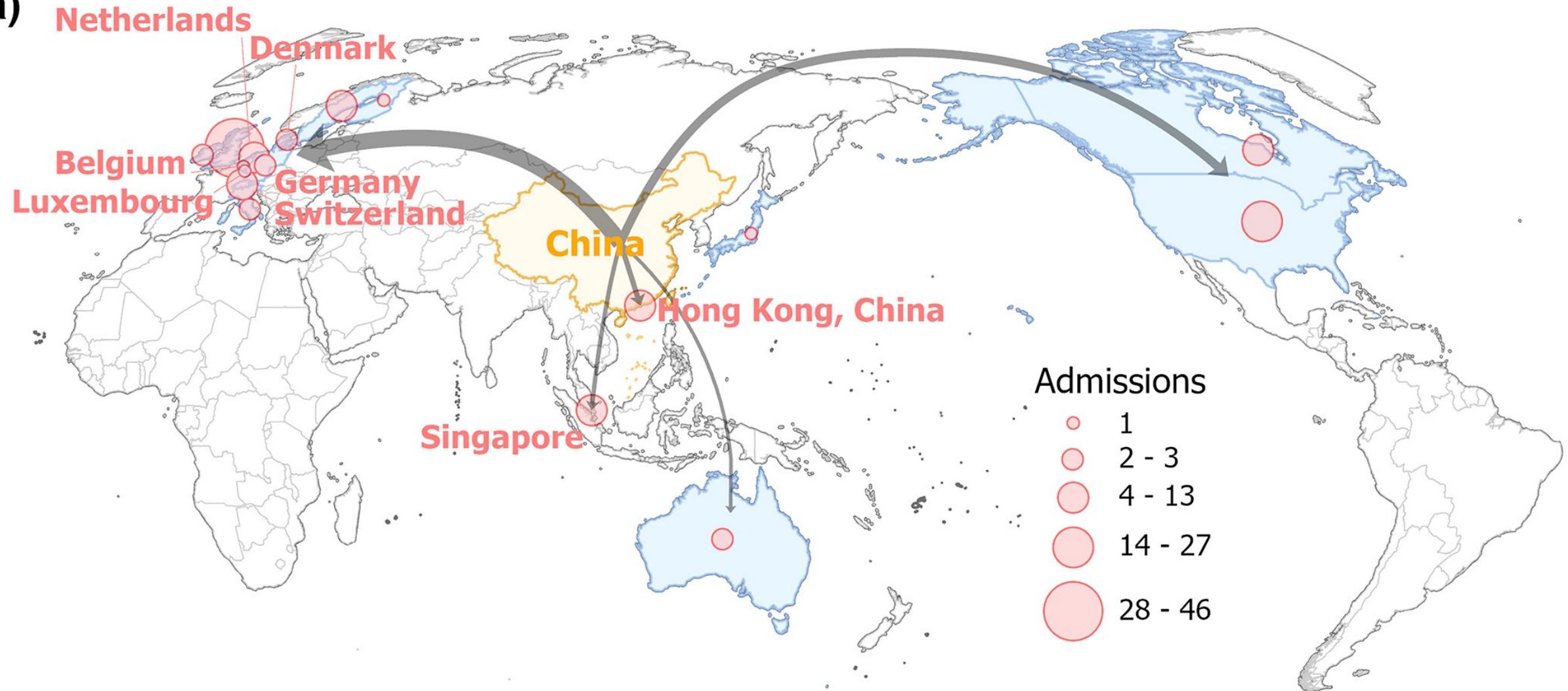
- 39 main questions
 - Distributed in the GISphere community
 - Chinese students who successfully applied for overseas GIS programs in 2022
 - 84 valid questionnaires

*6. 在您选择留学院校和专业的过程中，以下因素是否影响了您的决策，重要性如何？

Results – Spatial Distributions of Applications



(a)

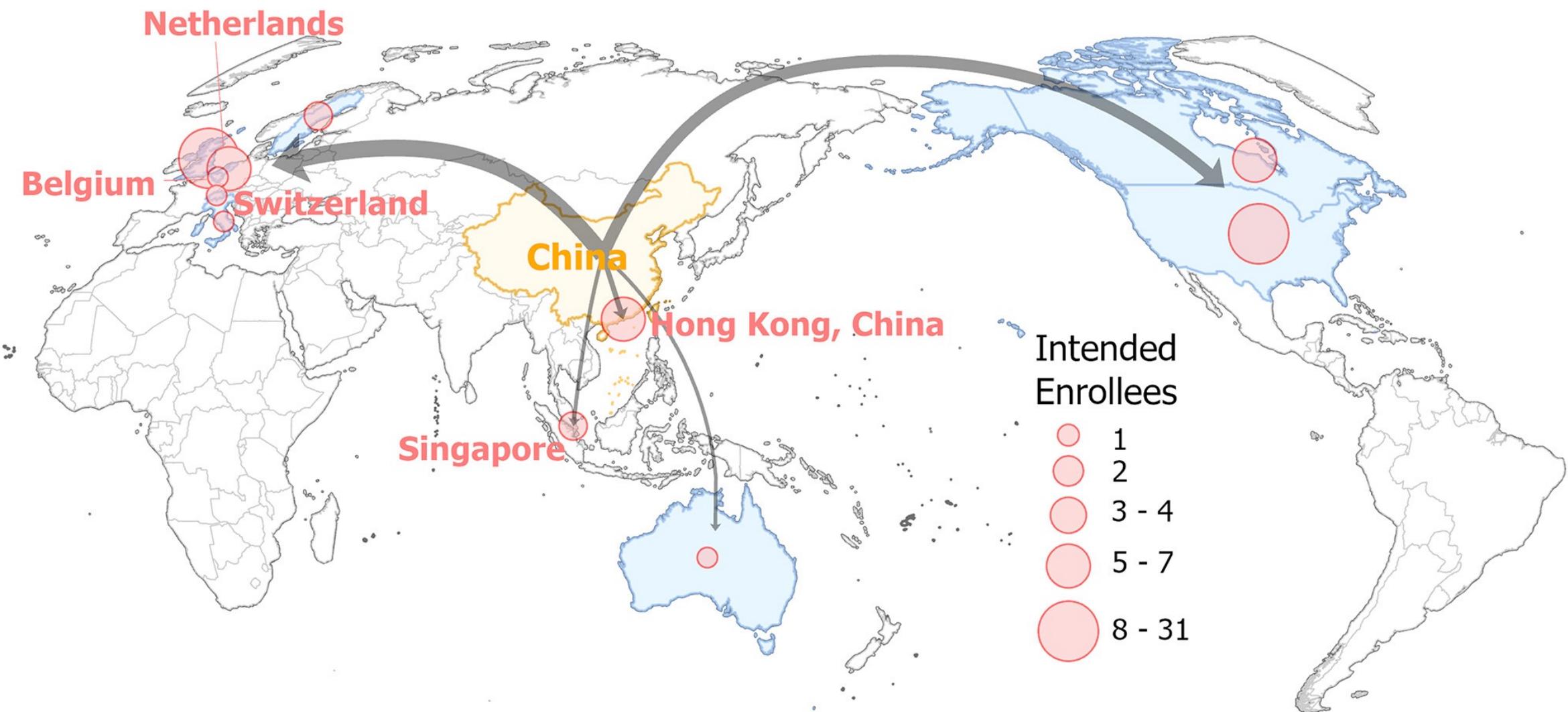


Admissions: Number of admissions by countries

Results – Spatial Distributions of Applications



(b)

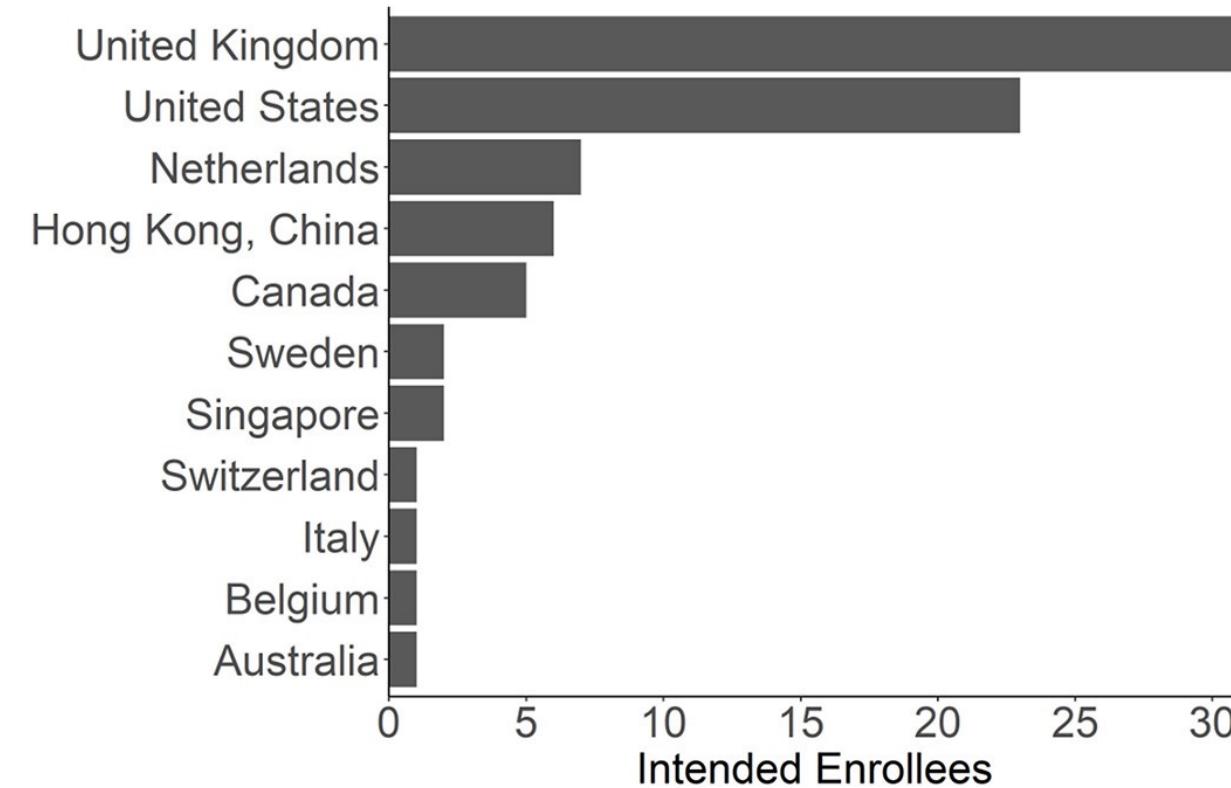


Intended Enrolees: Number of students intended to enrol by countries

Results – Statistics of Enrolments

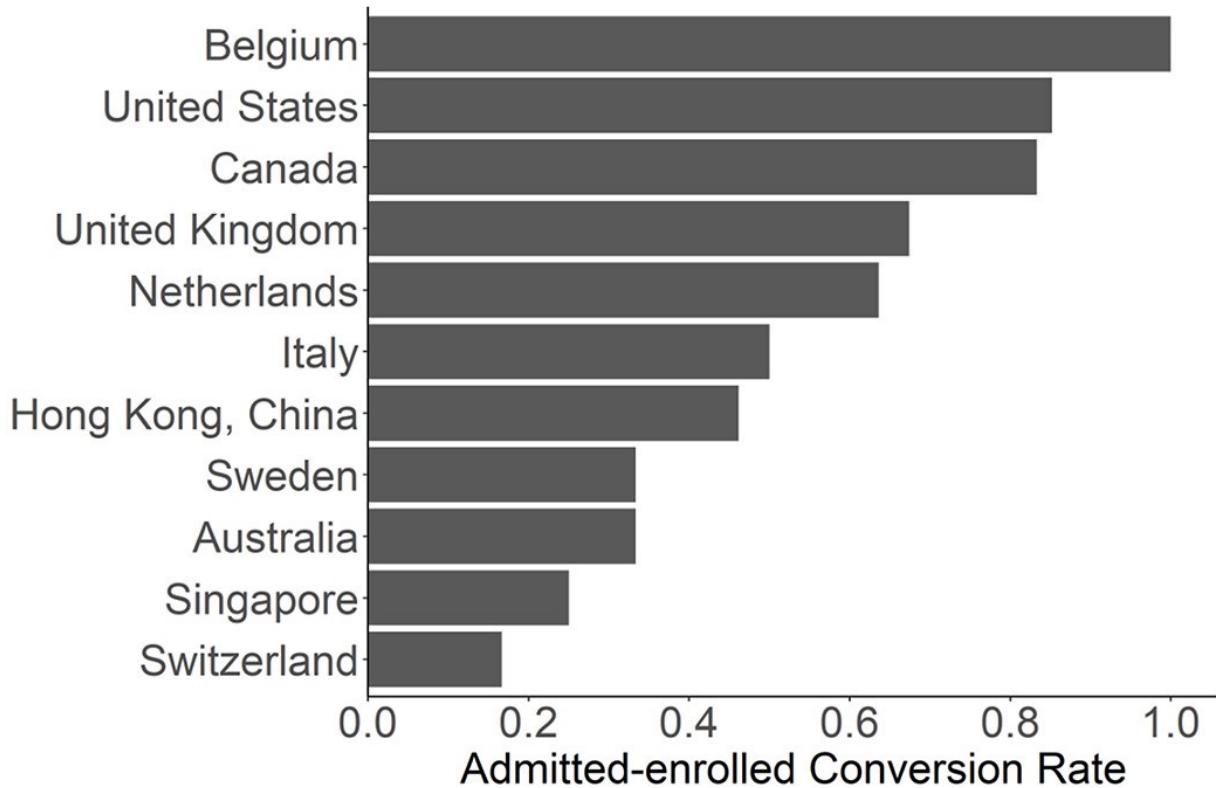


(c)



Number of students intended
to enroll by countries

(d)

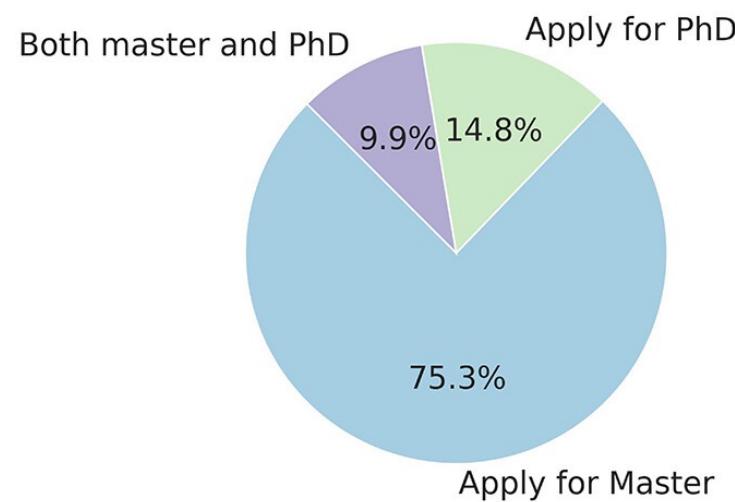


Admitted-enrolled Conversion Rate

Results - Participants Backgrounds



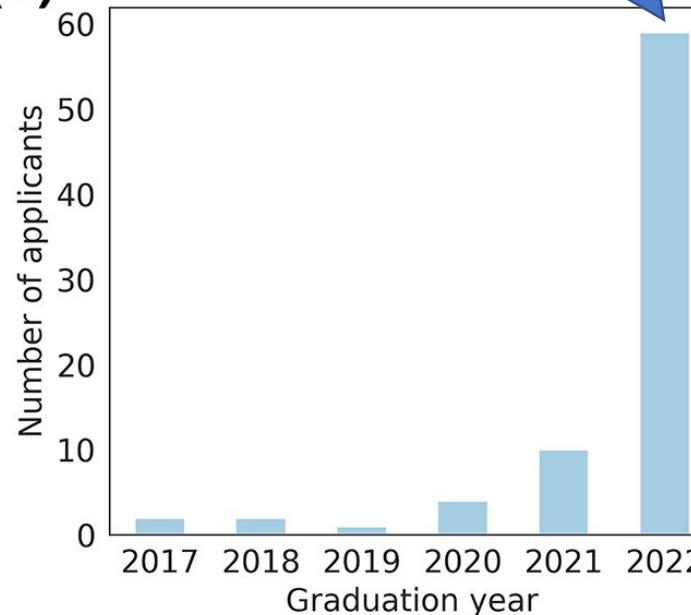
(a)



Types of degree programs

Majority: new graduates

(b)



Number of participants
who graduated each year

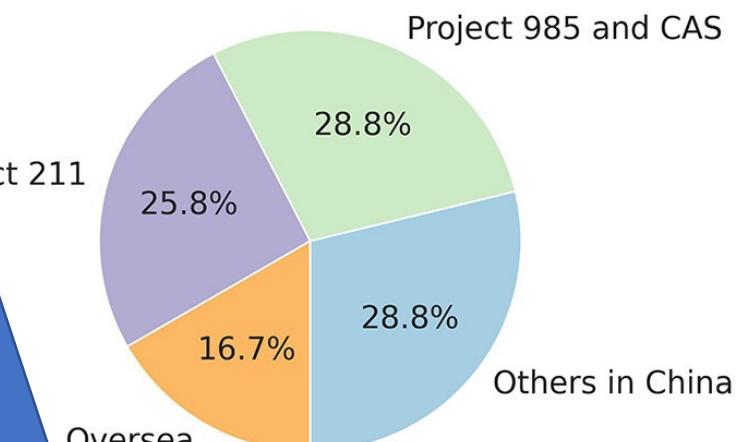
(c)

39 elite universities in China and the Chinese Academy of Sciences (CAS)

Project 211

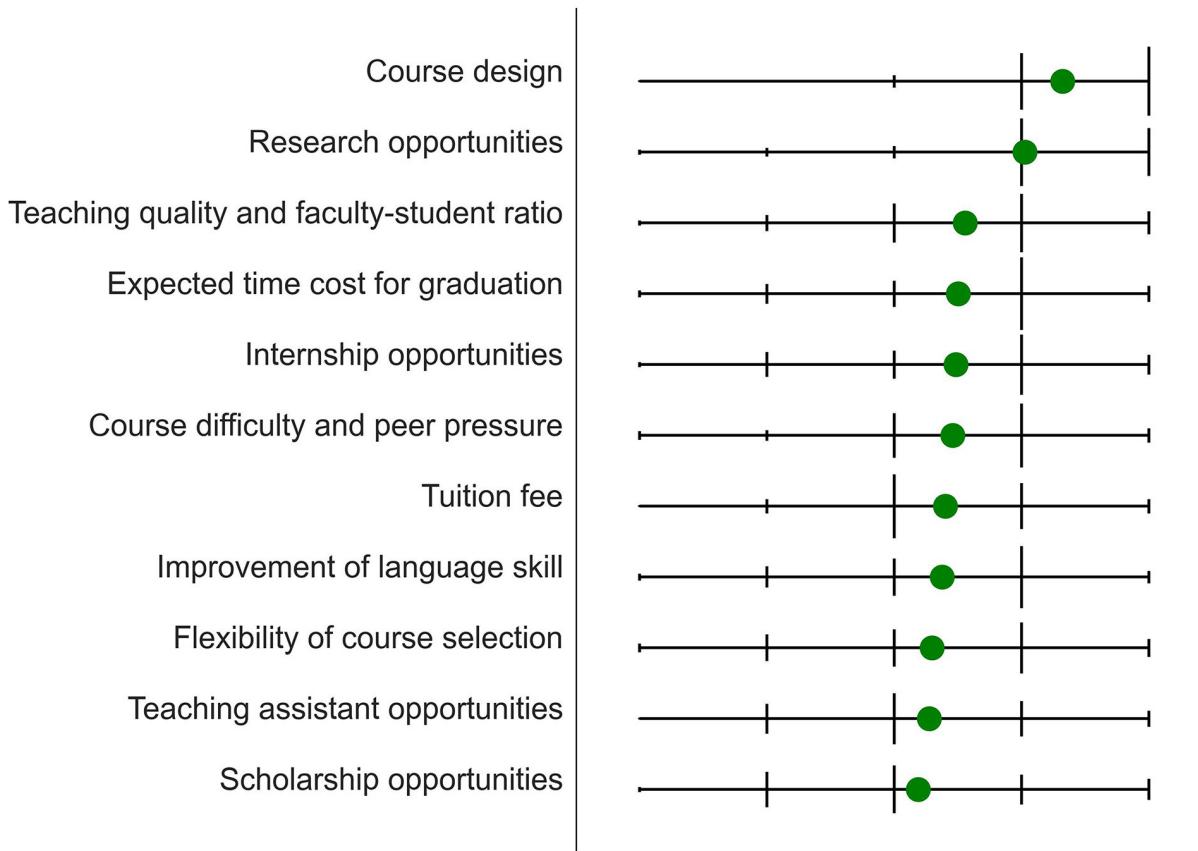
Oversea

73 second-tier key universities



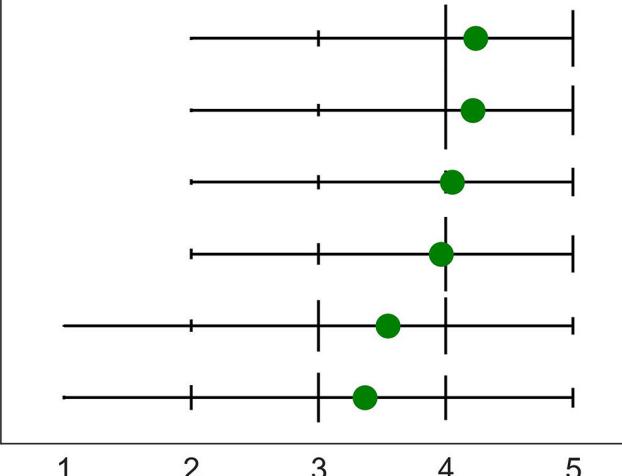
Categories of graduated
institutions

Results - Education Quality and Awareness



Education Quality Factors

Overall ranking and international reputation
Ranking and international reputation in the field
Advisor's academic reputation
Recognition of the university and program in China
Historical academic reputation
International academic cooperation and exchange activities



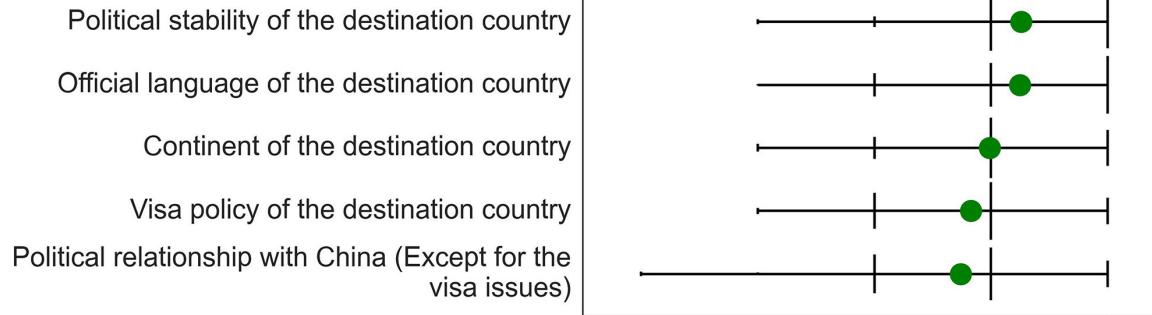
Awareness of Programs

Results - Physical, Social, and Political Environments

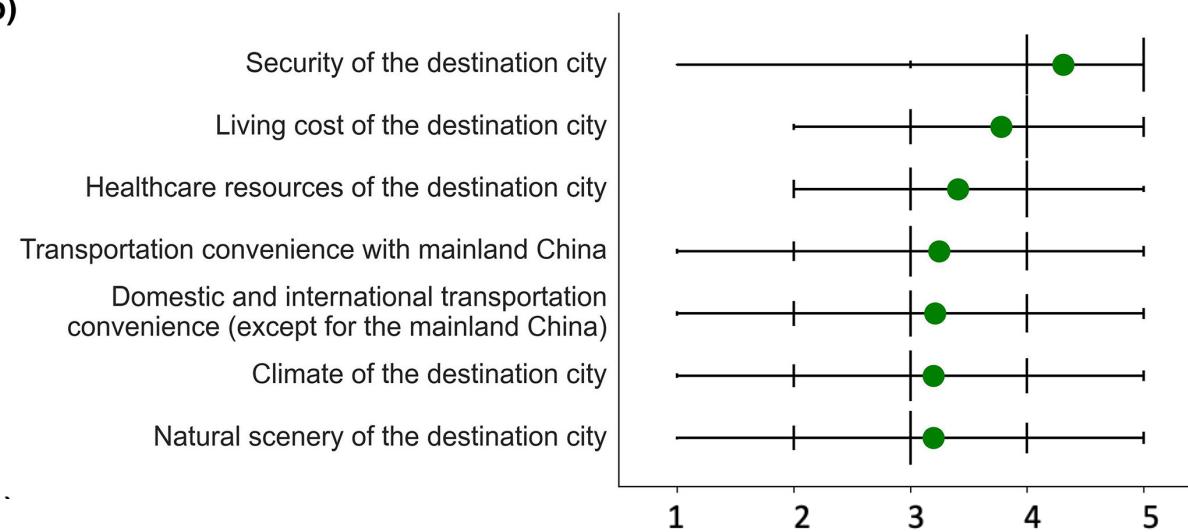


Country Level Factors

(a)

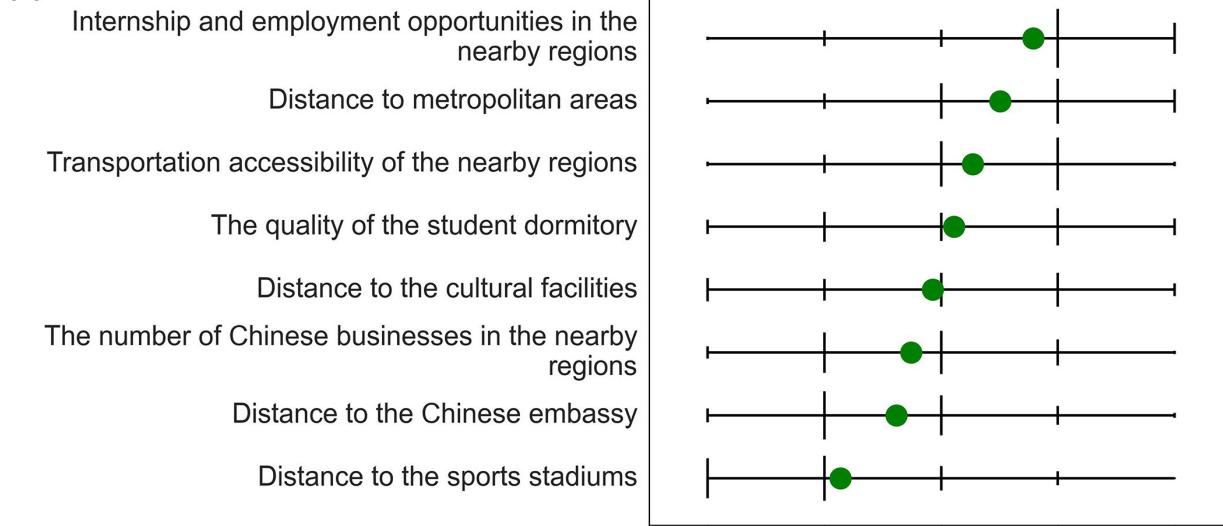


(b)

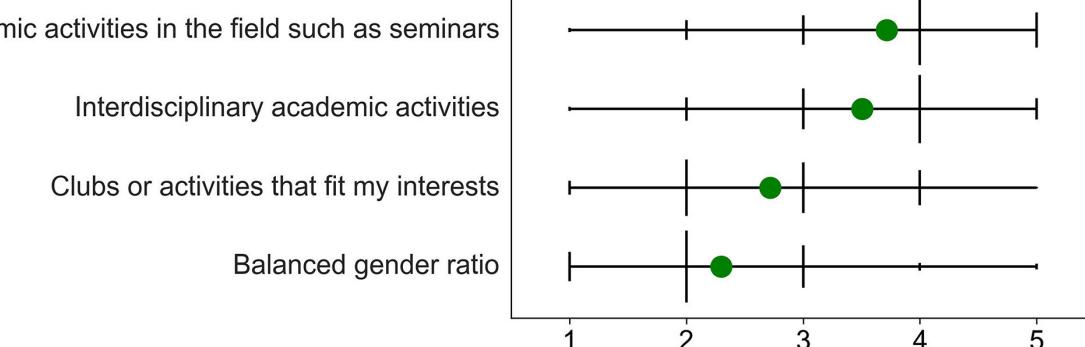


University Level Factors

(c)



(d)



Campus Life Factors

Results – Future Career Plans



Future Plans

Future Plans for Master's Program Applicants

Future Plans for Doctoral Program Applicants

Notice: 1 represents the **highest** priority
and 5 represents the **lowest** priority

(a)

Academia
Industry

(b)

Work in the destination country

Pursue a Ph.D. degree in abroad

Return and work in China

Work in another overseas country

Pursue a Ph.D. degree in China

Pursue another master's degree

(c)

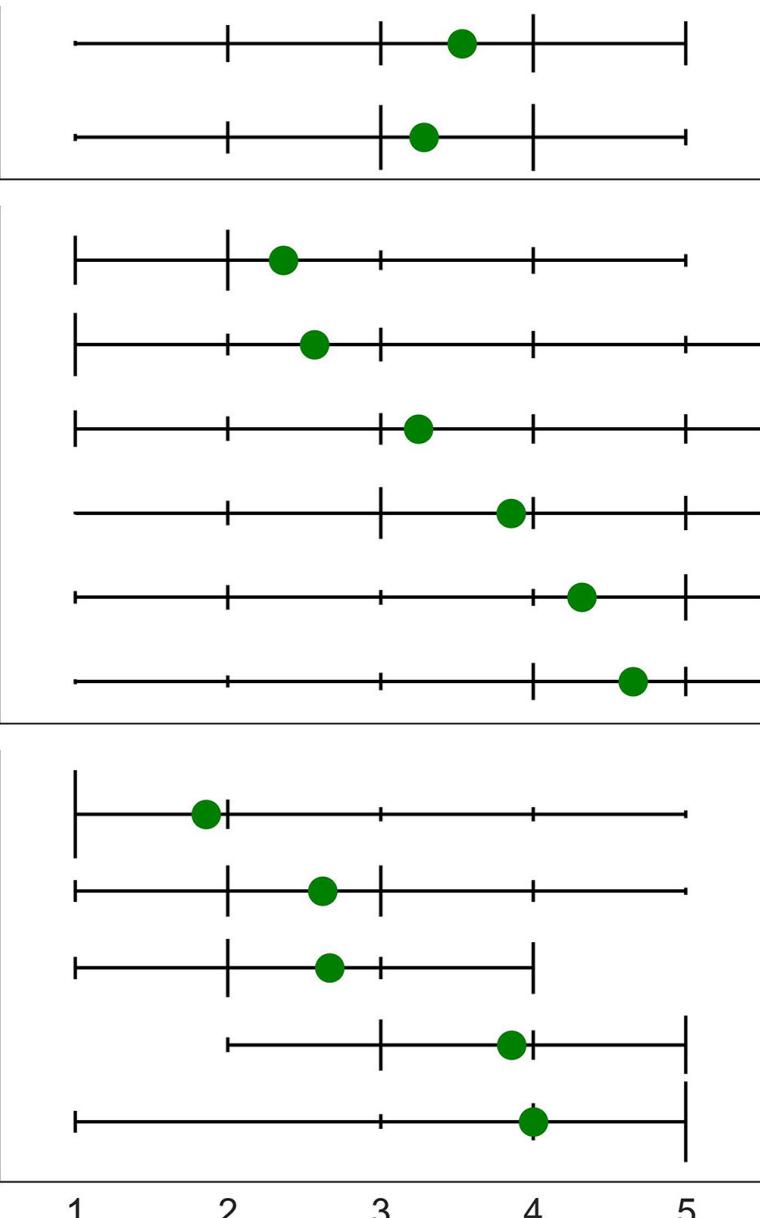
Work in academia as a postdoc or faculty in
oversea countries

Work in industry in the destination country

Work in academia as a postdoc or faculty in China

Work in industry in another overseas country

Work in industry and return to China



Results - Improved Employment Prospects in Industry



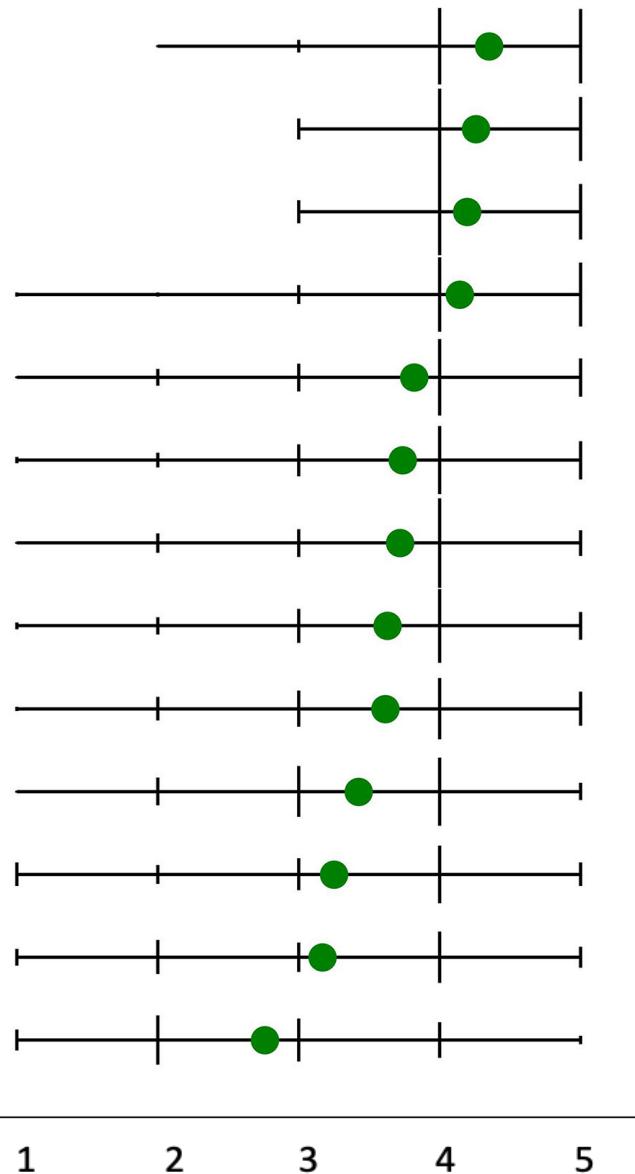
Key Takeaways

Students consider **general knowledge and skills** more than **professional knowledge and skills**

The overall prospects of the field is important

No significant differences between factors related to jobs in China and jobs outside of China

- (a) The general knowledge and skills trained in the program fit my career plan
- The overall prospects of this field in industry
- The future job in this field fits my interests
- The professional knowledge and skills trained in the program fit my career plan
- The average salary of jobs in private sectors in China
- The average salary of jobs in the destination country or region
- Alumni in industry
- The opportunity of finding jobs in the destination country or region
- The opportunity of finding jobs in private sectors in China
- Chinese alumni in industry
- The difficulty of immigration to the destination country after working in industry
- The opportunity of finding jobs in public institutions in China
- The proportion of colleagues who have study or work abroad experience



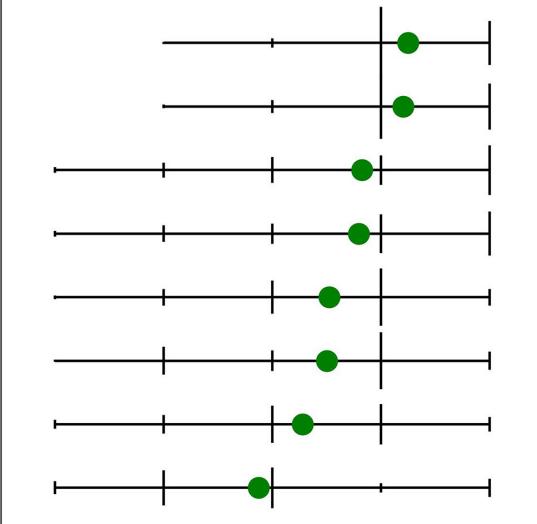
Results - Improved Employment Prospects in Academia



Master's Students

(b)

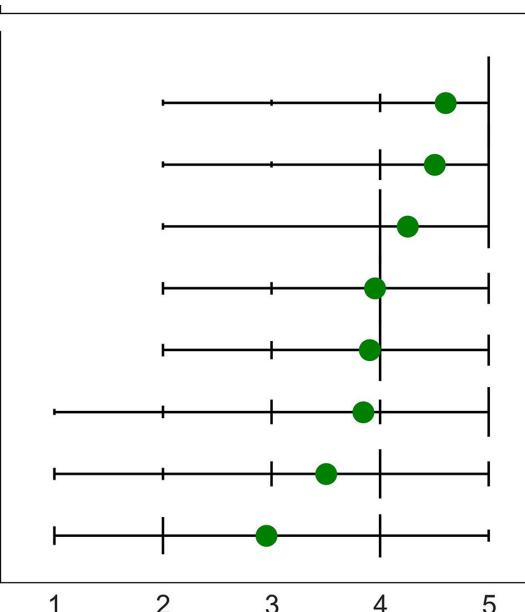
- The research relevant to the program fits my interests
- The overall prospects of this field
- The opportunity to apply for scholarship of an overseas Ph.D. program after graduation
- The opportunity of applying for an overseas Ph.D. program after graduation
- Alumni in academia
- The opportunity to pursue a Ph.D. degree at the destination university
- The difficulty of immigration to the destination country after working in academia
- The opportunity of applying for a Ph.D. program in China after graduation



Doctoral Students

(c)

- The research relevant to the program fits my interests
- The overall prospects of this field
- Alumni in academia
- The salary and funding as an overseas faculty after graduation
- The opportunity to find an overseas faculty position after graduation
- The opportunity to apply for funding and be selected for talented programs in China after graduation
- The difficulty of immigration to the destination country after working in academia
- The opportunity to obtain a faculty position at the destination university after graduation



Key Takeaways

- Research fit applicants' interests and overall prospects of the field ranked highest for both Master's and Doctoral applicants
- Difficulty of immigration is relatively unimportant

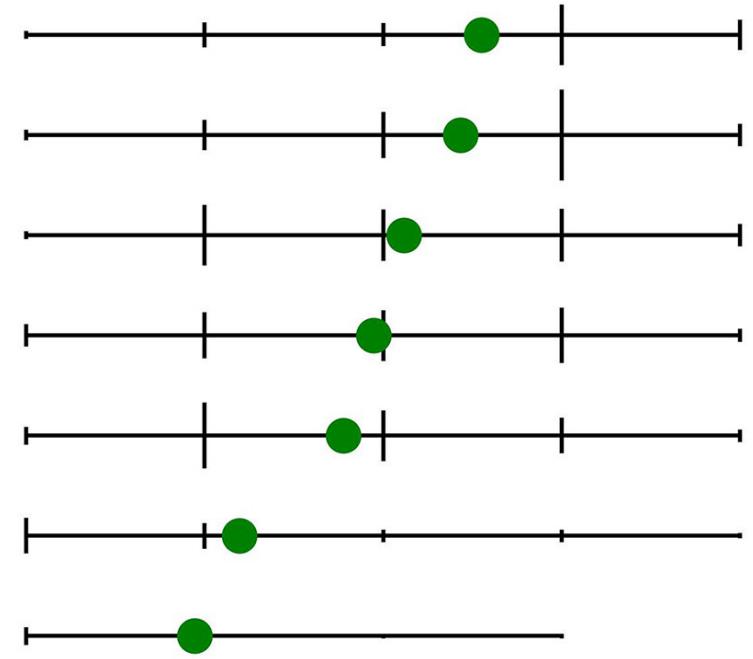
Results – Personal Recommendations



Personal Recommendations

(a)

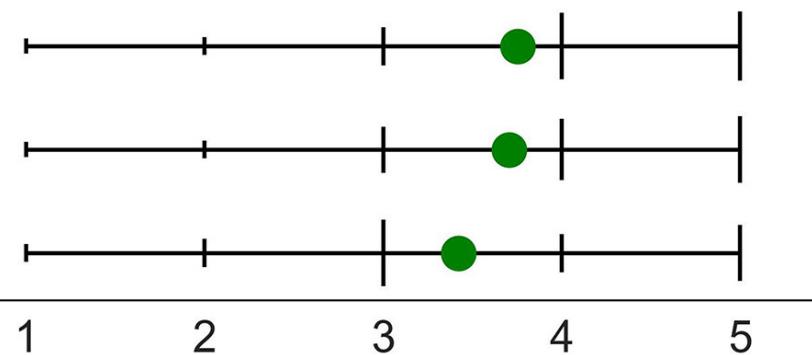
- Academic advisor
- Senior students of the same major
- Classmates of the same major
- Parents
- Friends who are not in the same major
- Non-academic tutor
- Relatives living overseas



Online Resources

(b)

- The GISphere Guide website or other similar resources
- The GISphere application experience blogs or other similar resources
- Other students who are applying for GIS-related programs in the GISphere community



Results - Application Process

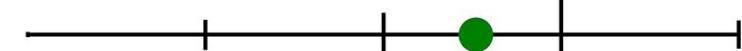


Admission Process

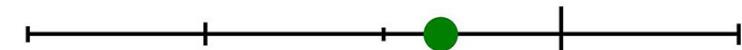
(a) The detailed information of the university or department's website



Friendliness of the application system



Friendliness of admissions staff



(b) GRE scores are not required



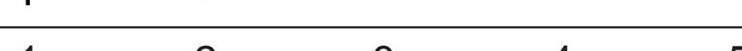
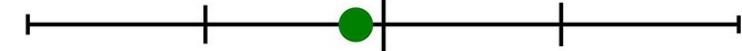
The university can issue a conditional offer with a language requirement



No interview required

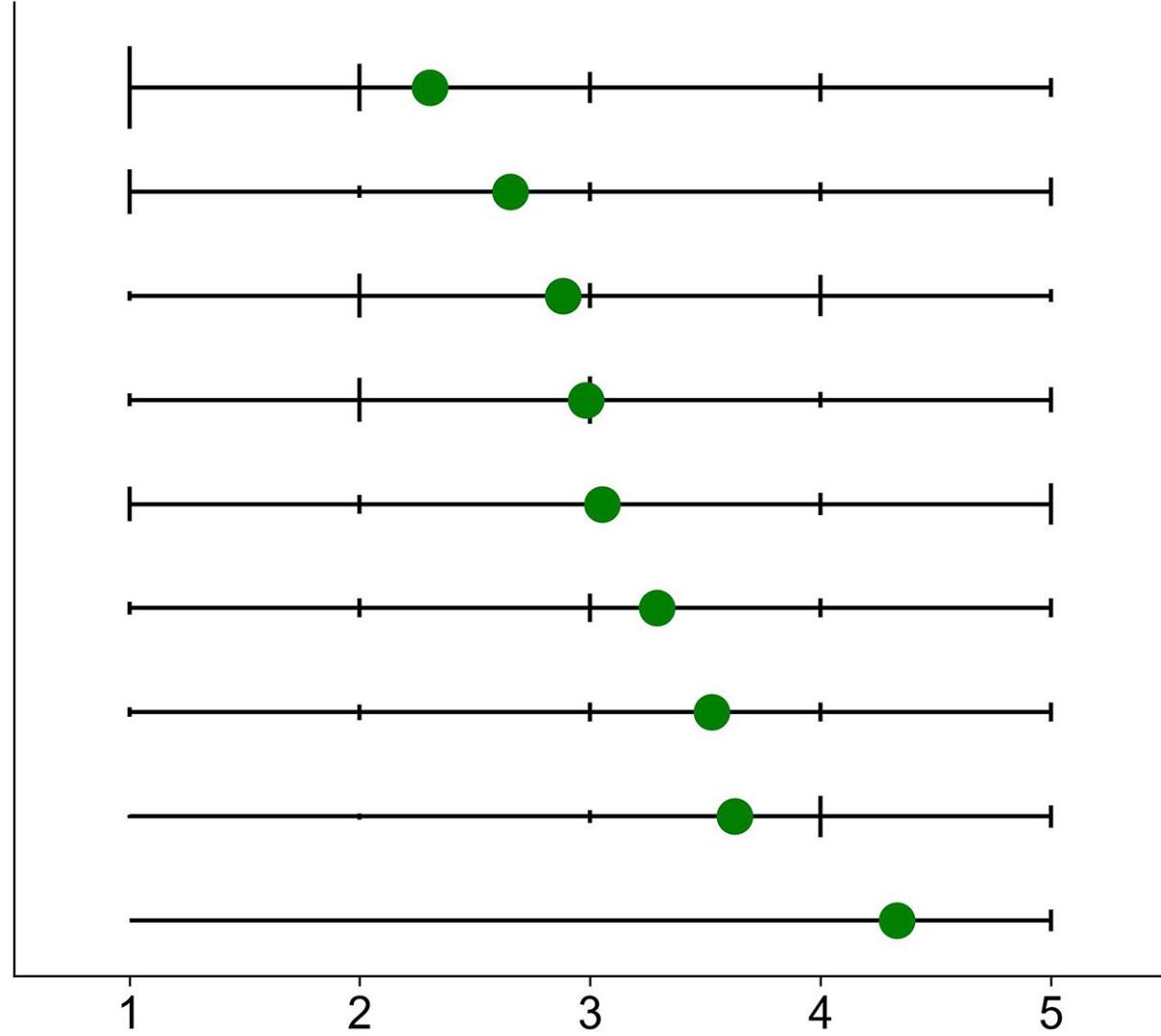
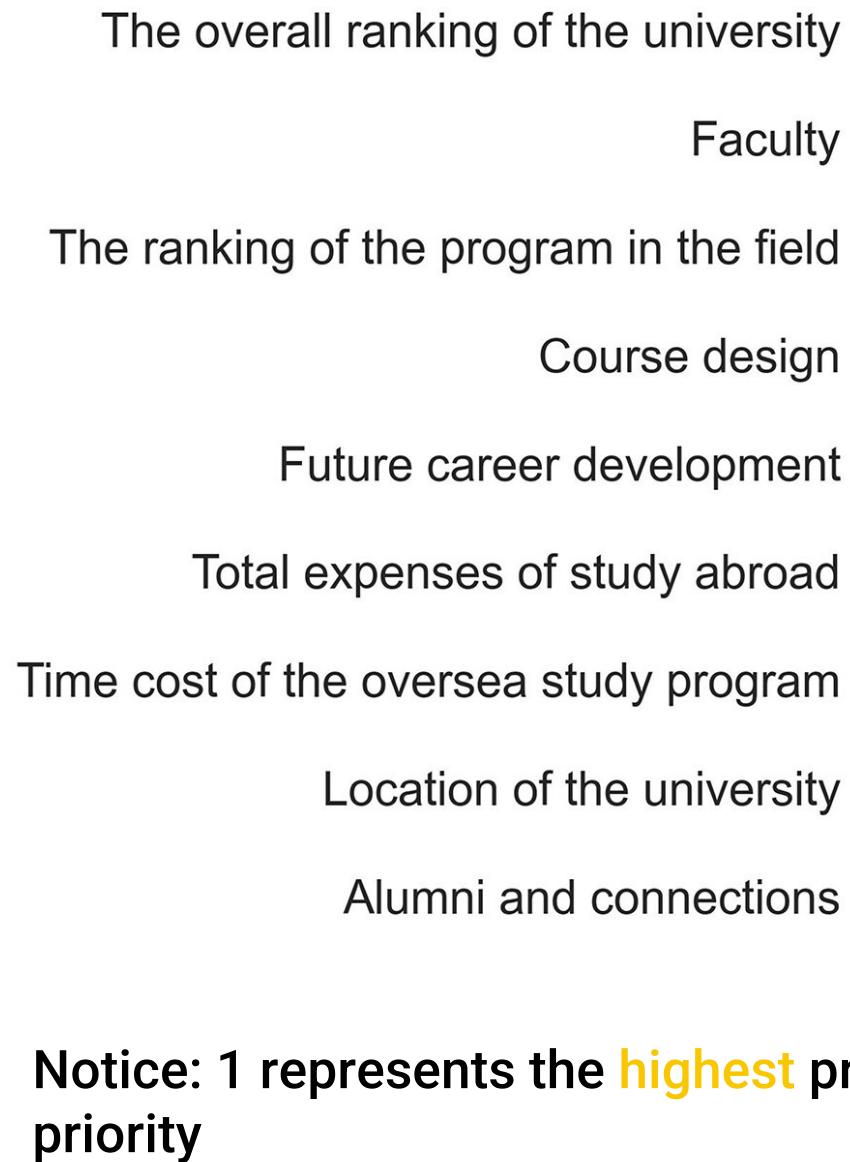


The university accepts language scores other than IELTS and TOEFL (e.g. duolingo)



Admission Requirements

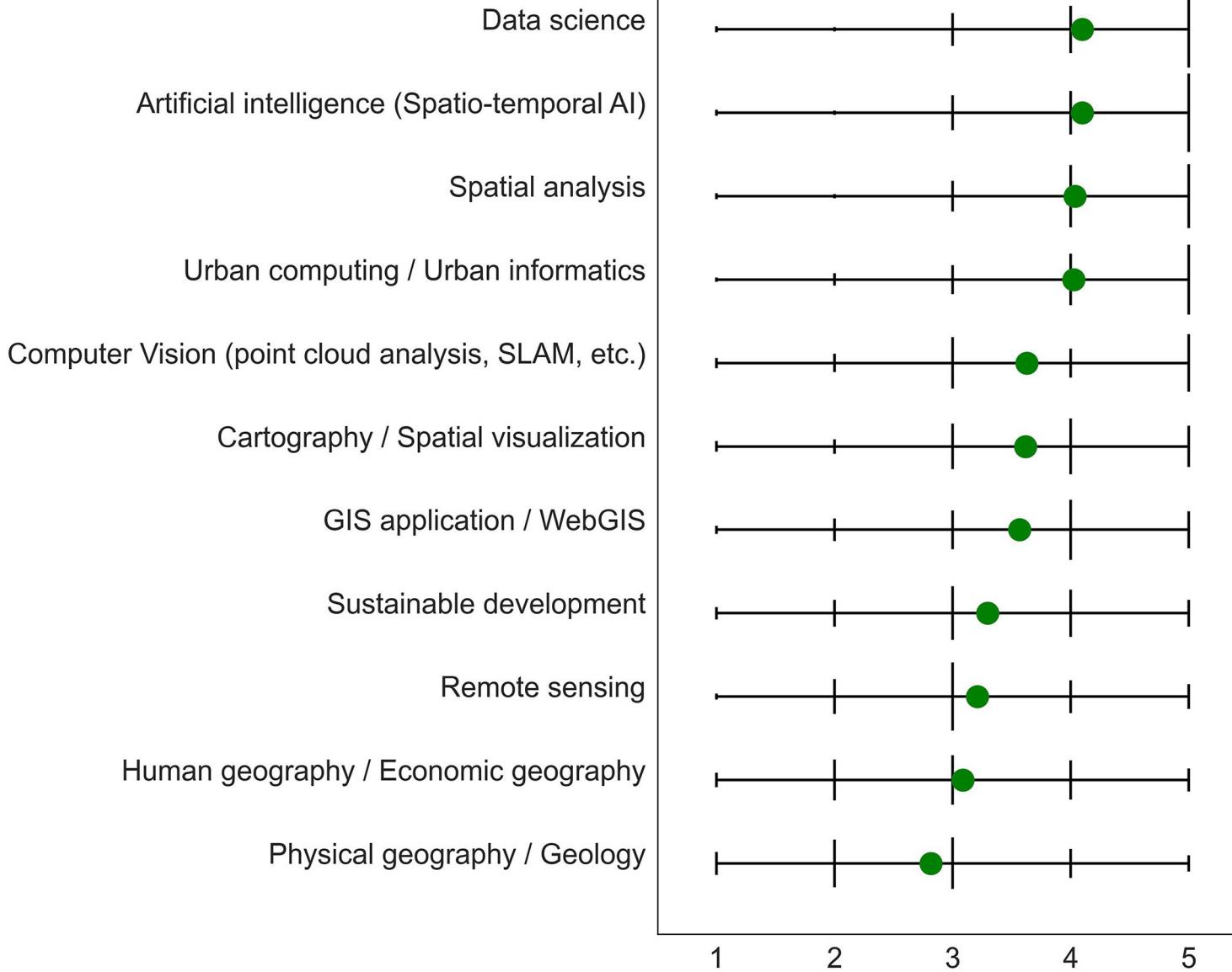
Results - Overall Rankings of Factors



Implications for GIS Programs: Students' Expectations



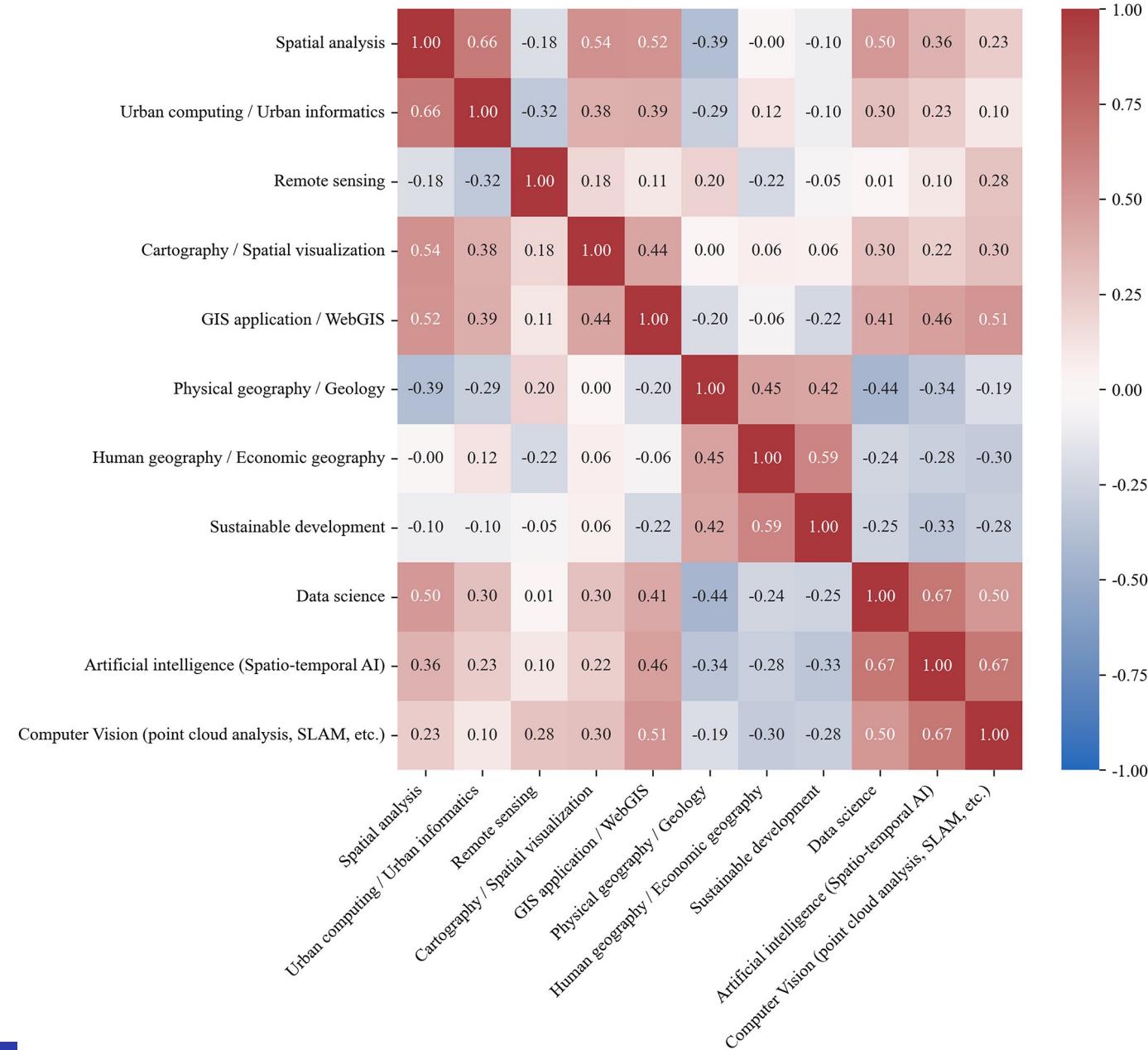
(b)



Implications for GIS Programs: Popular Topics



Popular course topics and their correlations





1

This is the first study to understand the process of students choosing GIS graduate programs

2

We identified five key factors: (1) Education quality and awareness, (2) physical, social, and political environments, (3) improved employment prospects, (4) personal recommendations, and (5) the application process

3

We provide practical insights for both GIS applicants and GIS graduate program managers to promote global GIS education





