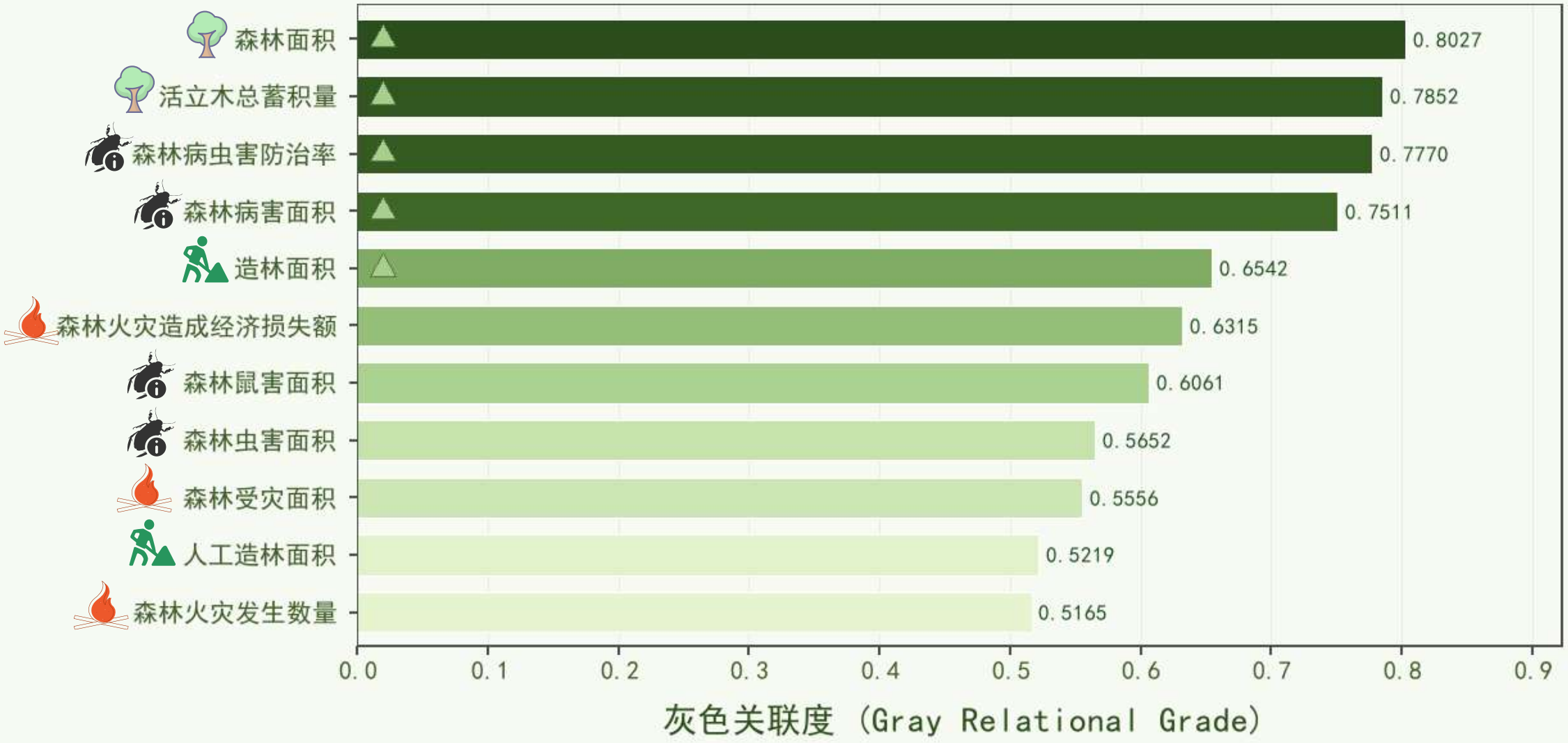
林业总产值关联度分析

基于灰色关联模型的林业指标关联性评估

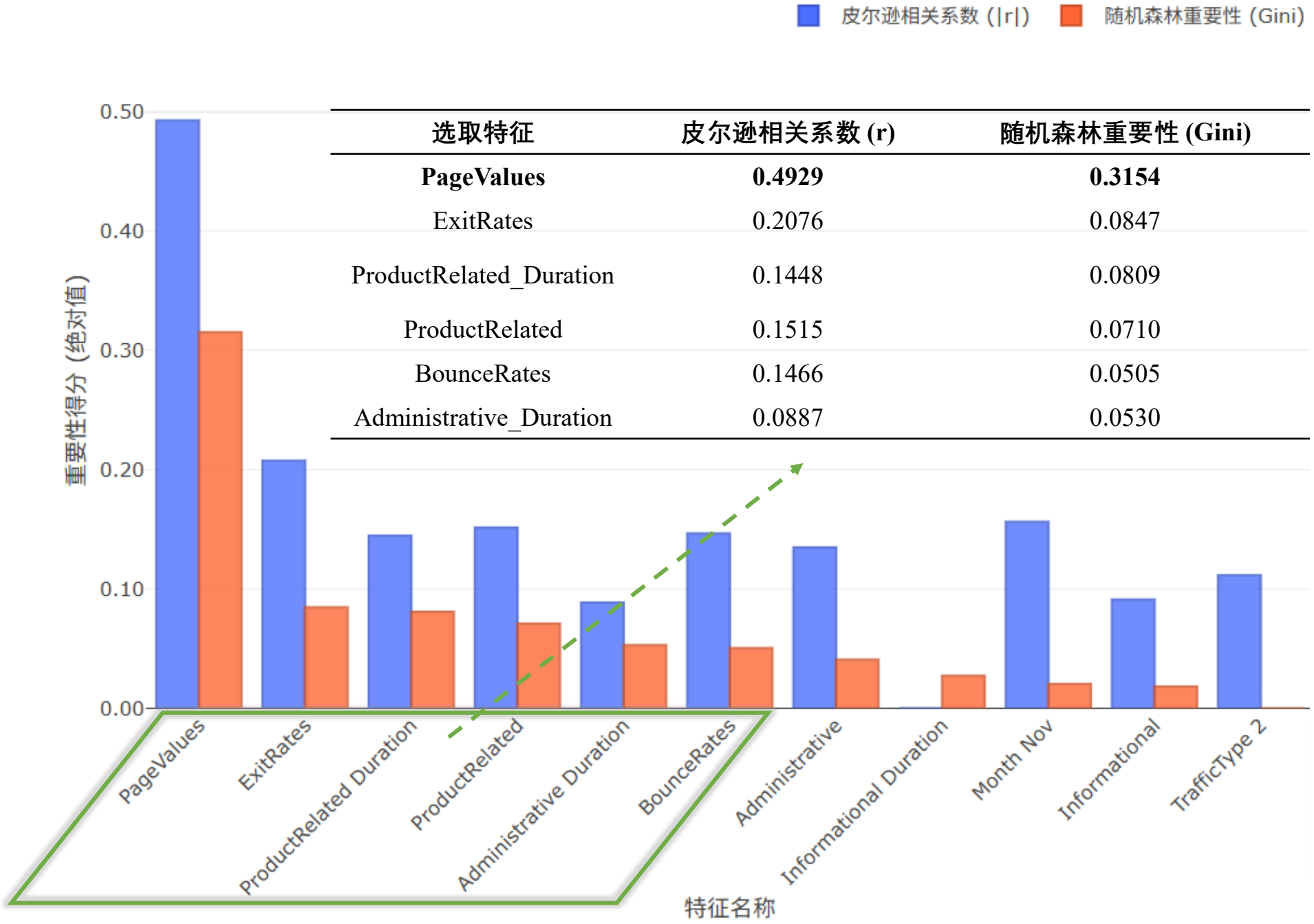
—资源基础　—生物危害

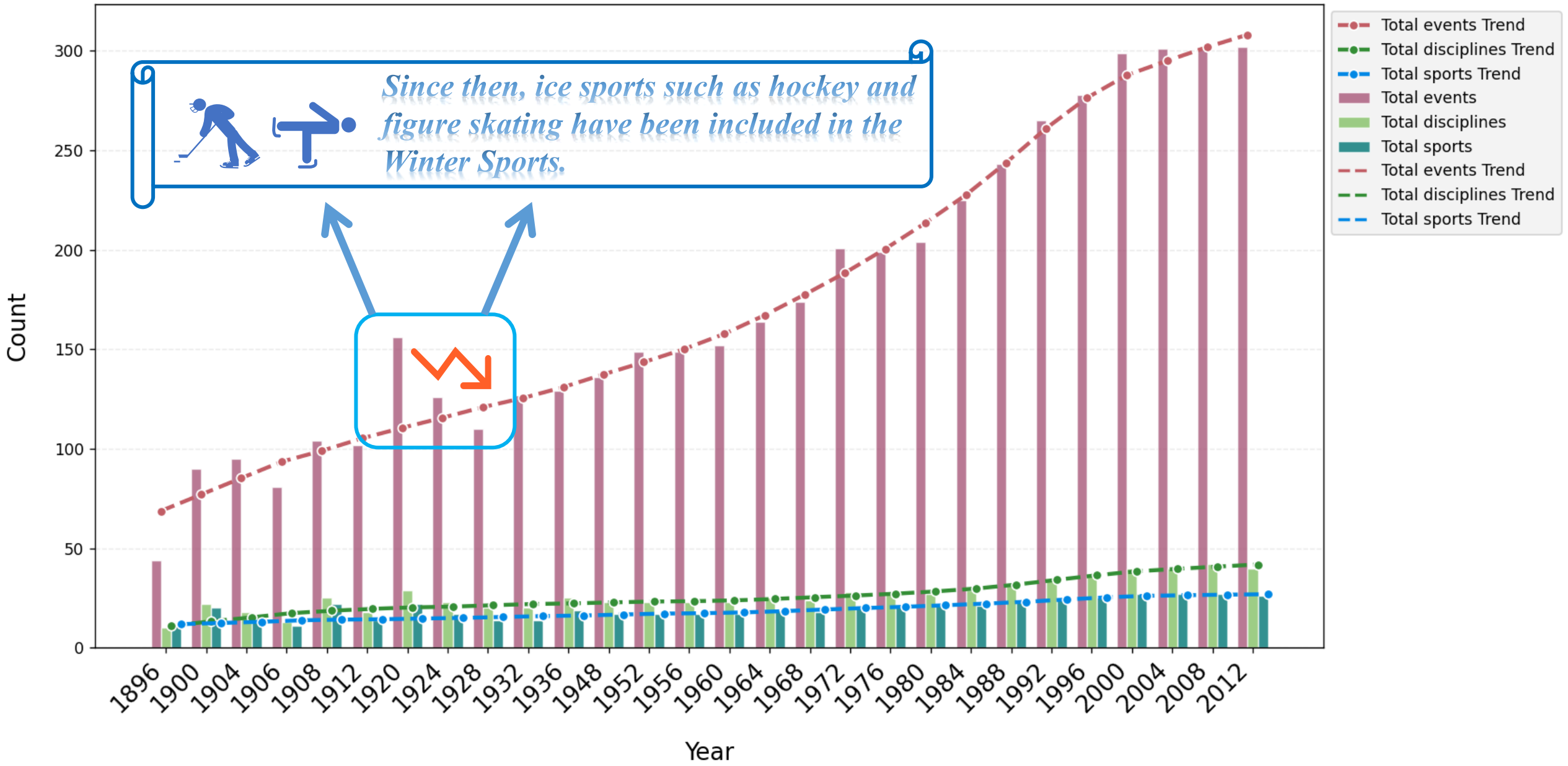
—建设投入　—灾害影响



数据来源：《中国森林资源报告》 | 分析时段：2005-2024

选取特征	皮尔逊相关系数 (r)	随机森林重要性 (Gini)
PageValues	**0.4929**	**0.3154**
ExitRates	0.2076	0.0847
ProductRelated_Duration	0.1448	0.0809
ProductRelated	0.1515	0.0710
BounceRates	0.1466	0.0505
Administrative_Duration	0.0887	0.0530




Since then, ice sports such as hockey and figure skating have been included in the Winter Sports.
Total events Trend
Total disciplines Trend
Total sports Trend
Total events
Total disciplines
Total sports
Total events Trend
Total disciplines Trend
Total sports Trend
Count
Year
0
50
100
150
200
250
300
1896
1900
1904
1906
1908
1912
1920
1924
1928
1932
1936
1948
1952
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
2008
2012

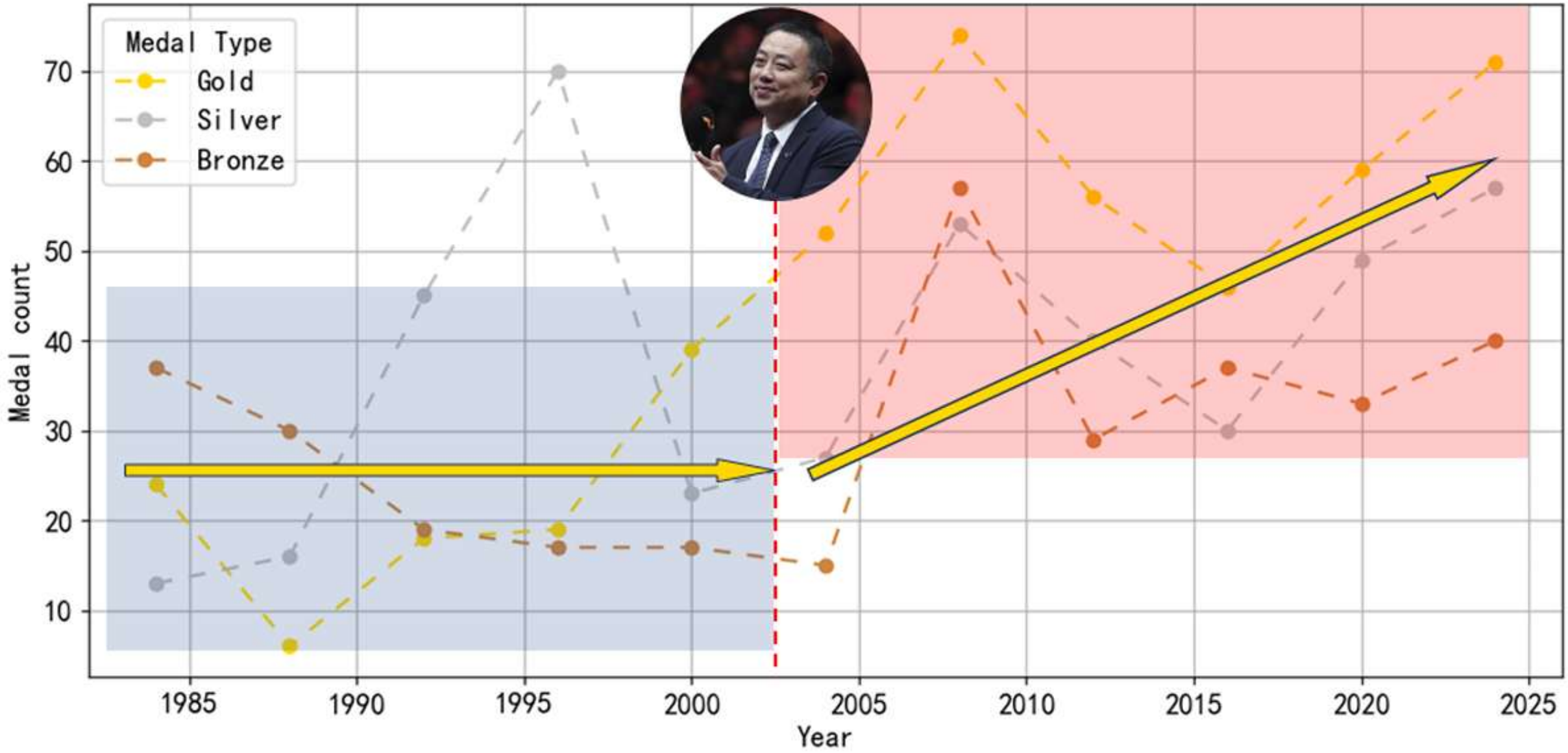


Figure 15: The concrete embodiment of good coach effect

Judgment Matrix	WMS	CF	CII
WMS	1	3	5
CF	1/3	1	3
CII	1/5	1/3	1

Consistency ratio CR = 0.0462 < 0.1

Athletic Potential Index =
0.6370·WMS + 0.2583·CF + 0.1047·CII

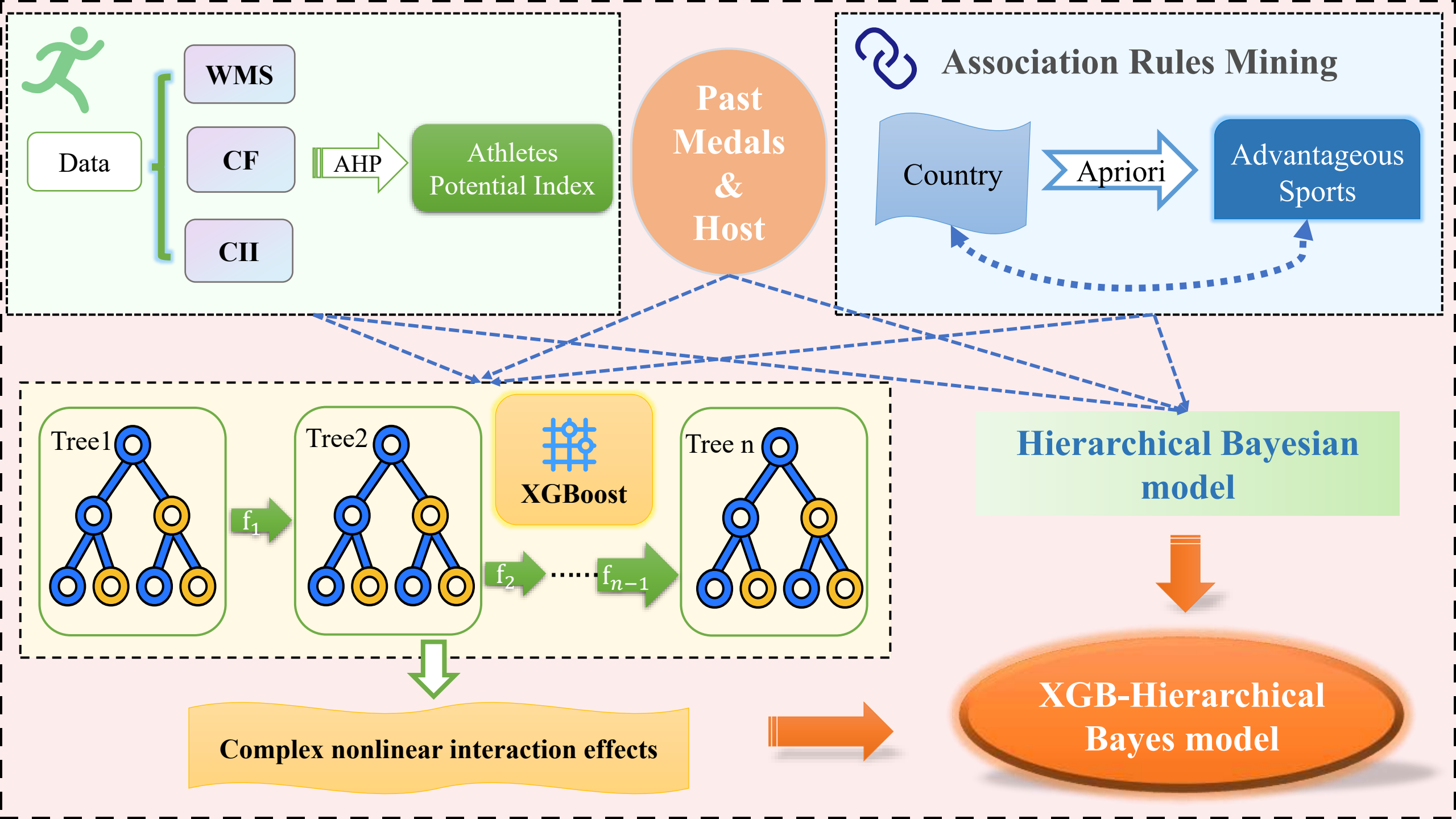
Objective Level : Determine the overall evaluation weighting of an athlete's performance

Criteria Layer

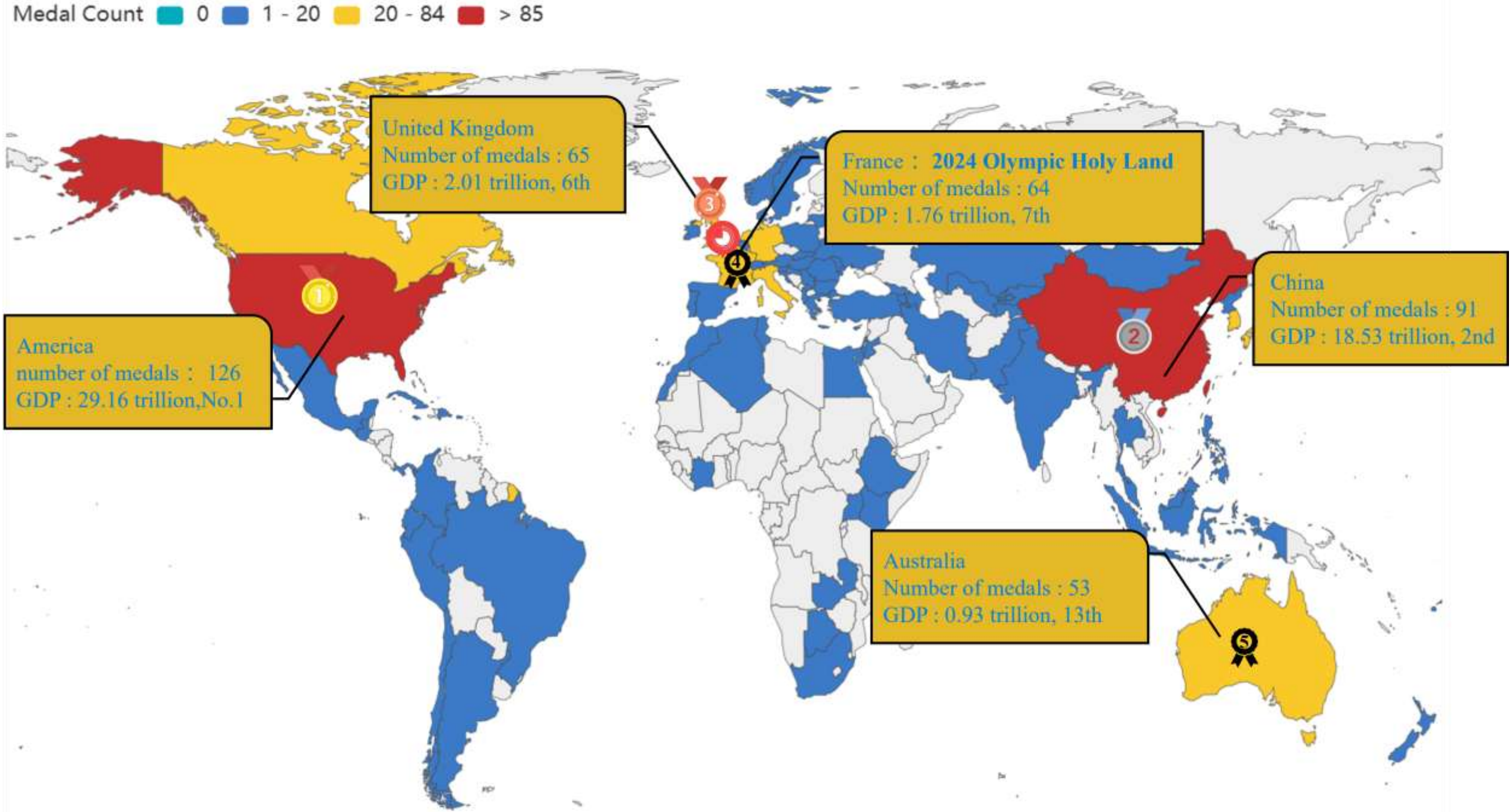
WMS | CF | CII

Alternative Layer

WMS: 63.7%
CF: 25.8%
CII: 10.5%

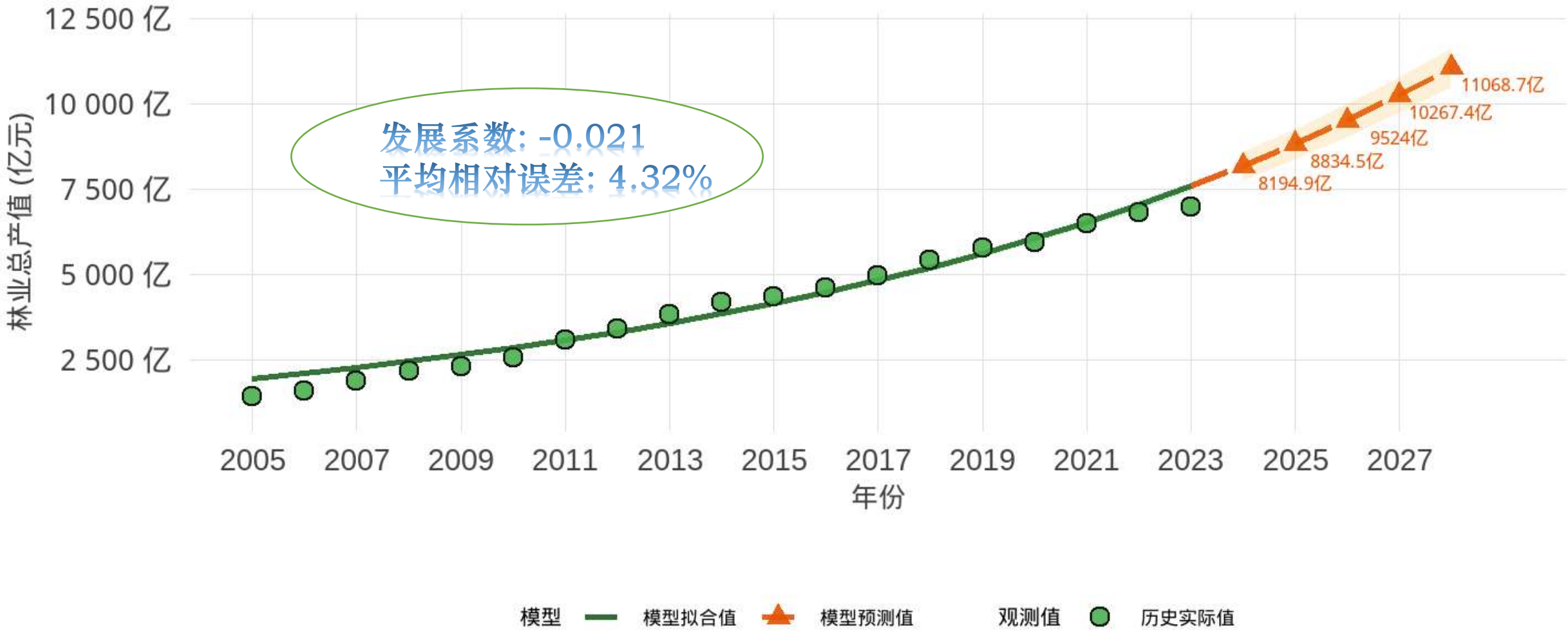

Data
WMS
CF
CII
AHP
Athletes Potential Index
Past Medals & Host
Association Rules Mining
Country
Apriori
Advantageous Sports
Tree1
Tree2
Tree n
XGBoost
f_1
f_2
f_{n-1}
Hierarchical Bayesian model
Complex nonlinear interaction effects
XGB-Hierarchical Bayes model

2024 Medal Distribution

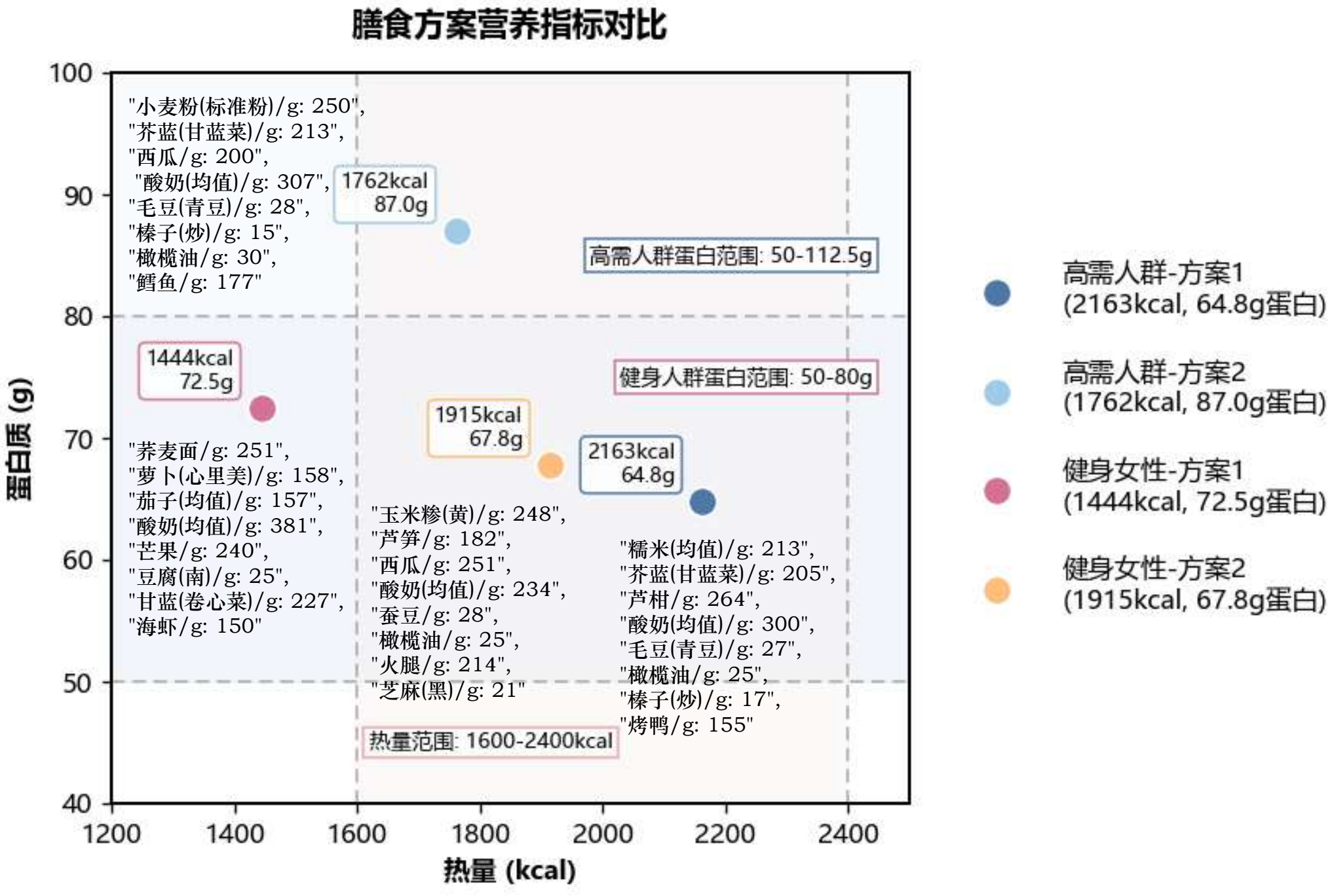


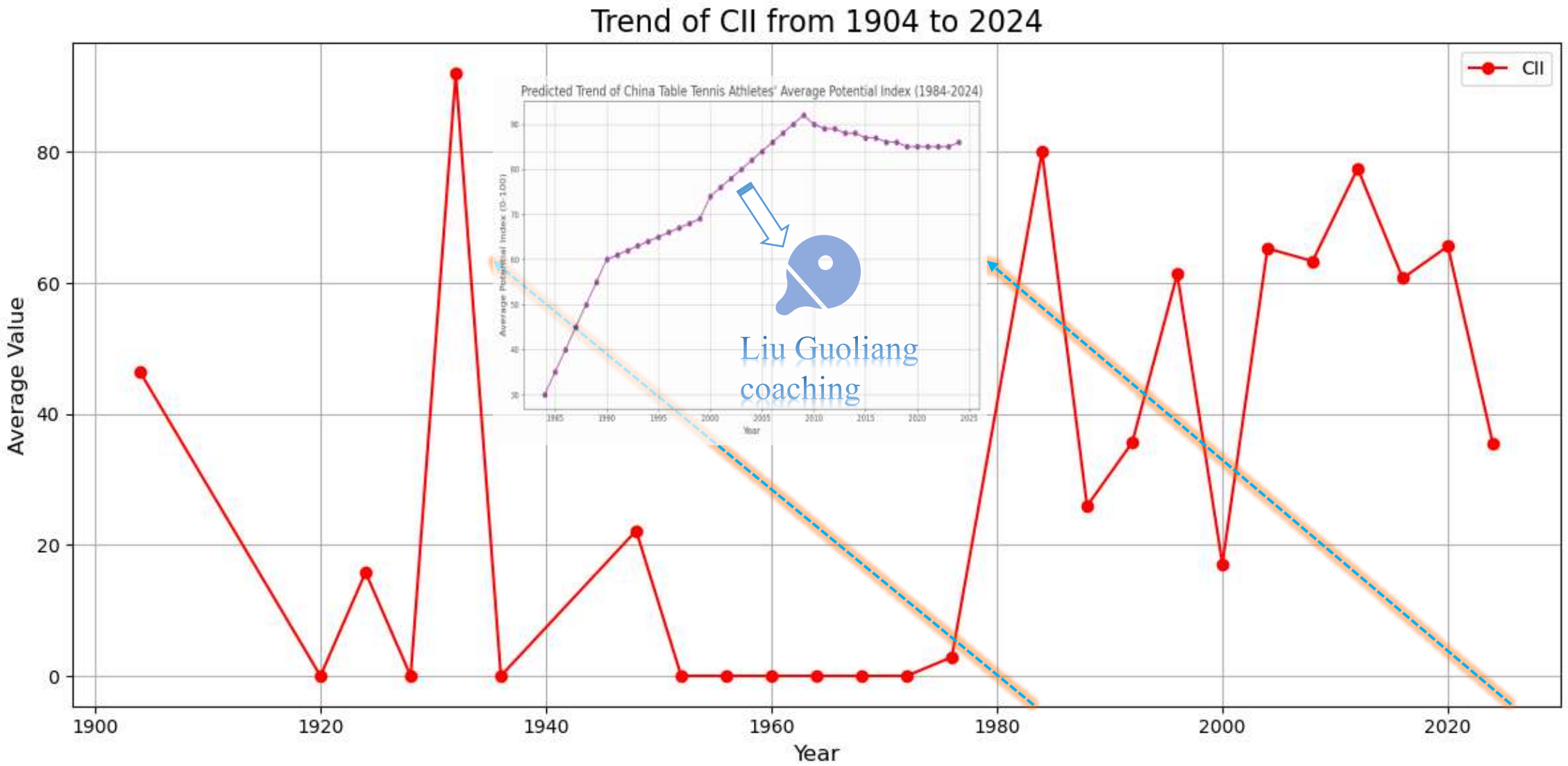
中国林业总产值灰色预测分析 (2005-2028)

基于GM(1,1)模型的林业经济发展趋势预测



数据来源：《中国森林资源报告》 | 预测方法：灰色系统理论


膳食方案营养指标对比
蛋白质 (g)
热量 (kcal)
100
90
80
70
60
50
40
1200
1400
1600
1800
2000
2200
2400
"小麦粉(标准粉)/g: 250",
"芥蓝(甘蓝菜)/g: 213",
"西瓜/g: 200",
"酸奶(均值)/g: 307",
"毛豆(青豆)/g: 28",
"榛子(炒)/g: 15",
"橄榄油/g: 30",
"鳕鱼/g: 177"
1762kcal
87.0g
高需人群蛋白范围: 50-112.5g
1444kcal
72.5g
健身人群蛋白范围: 50-80g
1915kcal
67.8g
2163kcal
64.8g
"荞麦面/g: 251",
"萝卜(心里美)/g: 158",
"茄子(均值)/g: 157",
"酸奶(均值)/g: 381",
"芒果/g: 240",
"豆腐(南)/g: 25",
"甘蓝(卷心菜)/g: 227",
"海虾/g: 150"
"玉米糁(黄)/g: 248",
"芦笋/g: 182",
"西瓜/g: 251",
"酸奶(均值)/g: 234",
"蚕豆/g: 28",
"橄榄油/g: 25",
"火腿/g: 214",
"芝麻(黑)/g: 21"
"糯米(均值)/g: 213",
"芥蓝(甘蓝菜)/g: 205",
"芦柑/g: 264",
"酸奶(均值)/g: 300",
"毛豆(青豆)/g: 27",
"橄榄油/g: 25",
"榛子(炒)/g: 17",
"烤鸭/g: 155"
热量范围: 1600-2400kcal
高需人群-方案1
(2163kcal, 64.8g蛋白)
高需人群-方案2
(1762kcal, 87.0g蛋白)
健身女性-方案1
(1444kcal, 72.5g蛋白)
健身女性-方案2
(1915kcal, 67.8g蛋白)


Trend of CII from 1904 to 2024
CII
Average Value
Year
0
20
40
60
80
1900
1920
1940
1960
1980
2000
2020
Predicted Trend of China Table Tennis Athletes' Average Potential Index (1984-2024)
Liu Guoliang
coaching

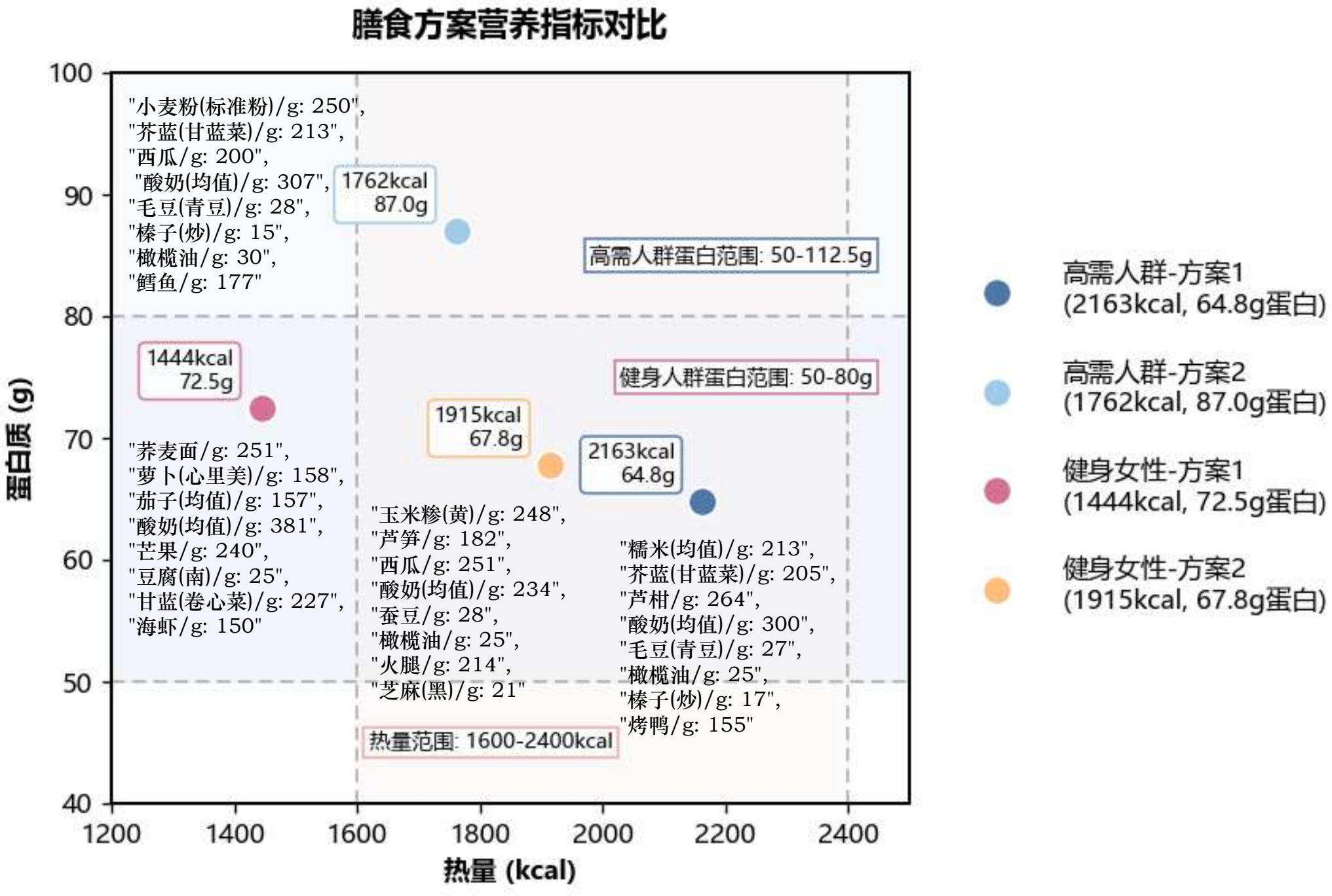

滦南县


曹妃甸区


开平区


玉田县


滦州市


膳食方案营养指标对比
蛋白质 (g)
热量 (kcal)
100
90
80
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60
50
40
1200
1400
1600
1800
2000
2200
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"橄榄油/g: 30",
"鳕鱼/g: 177"
1762kcal
87.0g
高需人群蛋白范围: 50-112.5g
1444kcal
72.5g
健身人群蛋白范围: 50-80g
1915kcal
67.8g
2163kcal
64.8g
"荞麦面/g: 251",
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"酸奶(均值)/g: 381",
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"豆腐(南)/g: 25",
"甘蓝(卷心菜)/g: 227",
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"玉米糁(黄)/g: 248",
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"西瓜/g: 251",
"酸奶(均值)/g: 234",
"蚕豆/g: 28",
"橄榄油/g: 25",
"火腿/g: 214",
"芝麻(黑)/g: 21"
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"芦柑/g: 264",
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"毛豆(青豆)/g: 27",
"橄榄油/g: 25",
"榛子(炒)/g: 17",
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热量范围: 1600-2400kcal
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(2163kcal, 64.8g蛋白)
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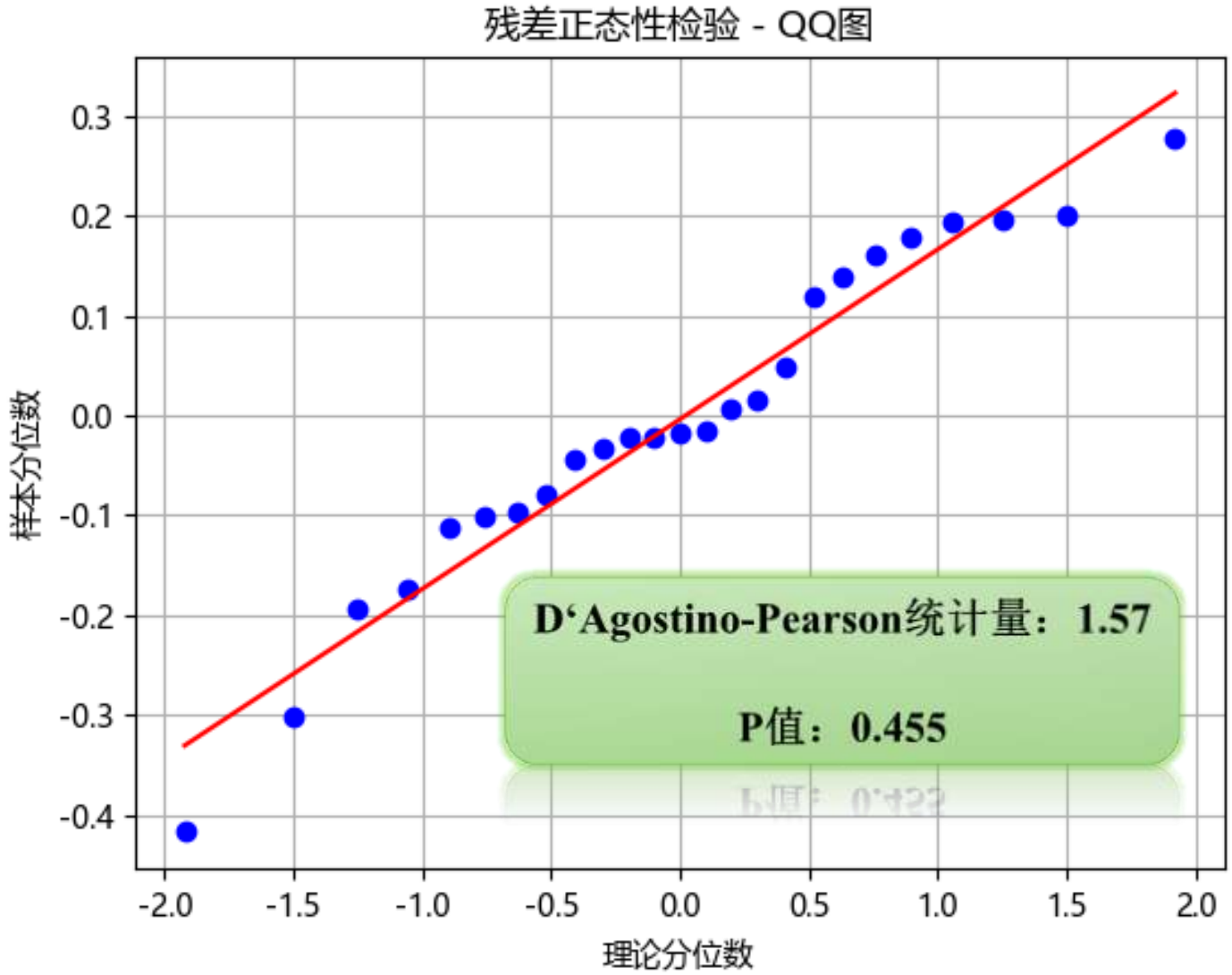
(1762kcal, 87.0g蛋白)
健身女性-方案1
(1444kcal, 72.5g蛋白)
健身女性-方案2
(1915kcal, 67.8g蛋白)


残差正态性检验 - QQ图
样本分位数
理论分位数
0.3
0.2
0.1
0.0
-0.1
-0.2
-0.3
-0.4
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
D'Agostino-Pearson统计量：1.57
P值：0.455

滚雪球采样

AHP
（层次分析法）

目标层	构建合理权重体系
准则层	一级指标
子准则层	二级指标
方案层	具体指标

K-means聚类

基于权重体系
计算二级指标

学生画像聚类

学力预测模型

Arima时序模型

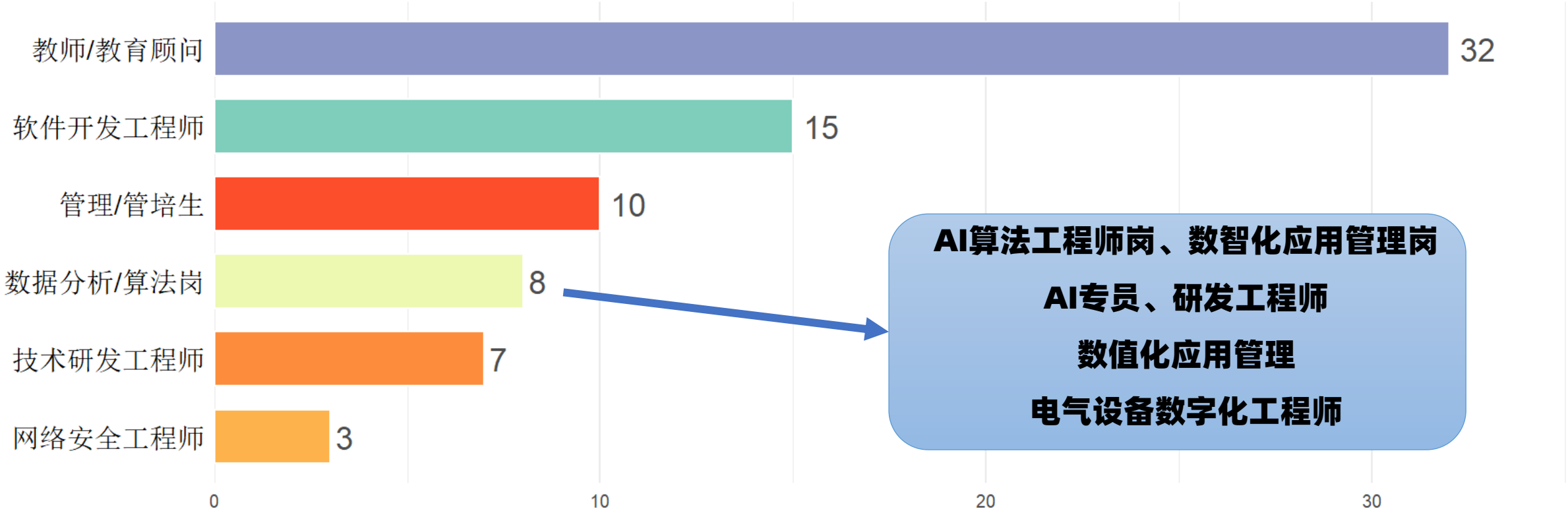
残差

LSTM记忆网络

“”

2025年华北理工大学数科相关岗位分布

仅包含与数学、统计、计算机相关的核心岗位

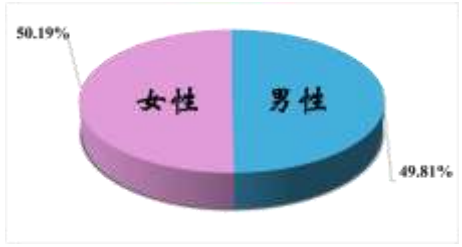


AI算法工程师岗、数智化应用管理岗

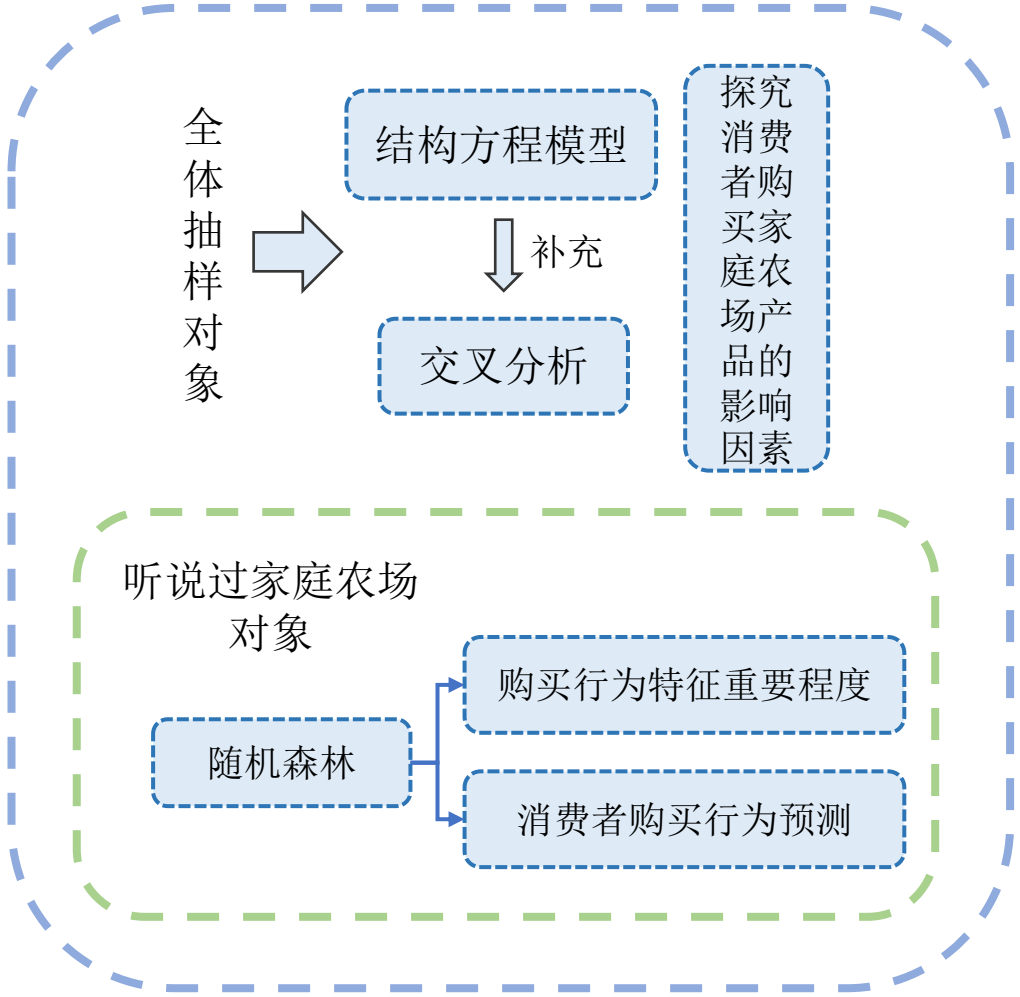
AI专员、研发工程师

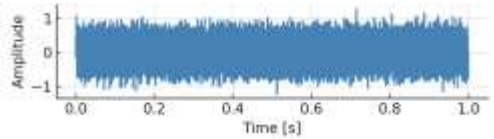
数值化应用管理

电气设备数字化工程师



50.19%
女性
男性
49.81%

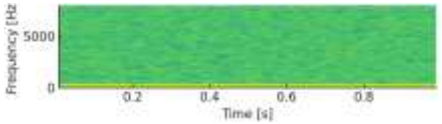

全体抽样对象
结构方程模型
补充
交叉分析
探究消费者购买家庭农场产品的影响因素
听说过家庭农场对象
随机森林
购买行为特征重要程度
消费者购买行为预测



语音信号输入

语音预处理

声学特征提取



传统语音识别系统

声学模型 ➡ 语言模型 ➡ 解码器

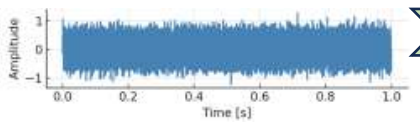
DNN-HMM 混合结构

统一神经网络结构模型

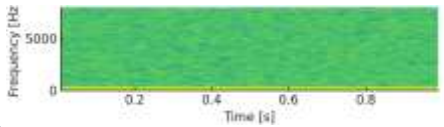
端到端传统语音识别系统
(End-to-End ASR)

语音信号输入

语音预处理



声学特征提取



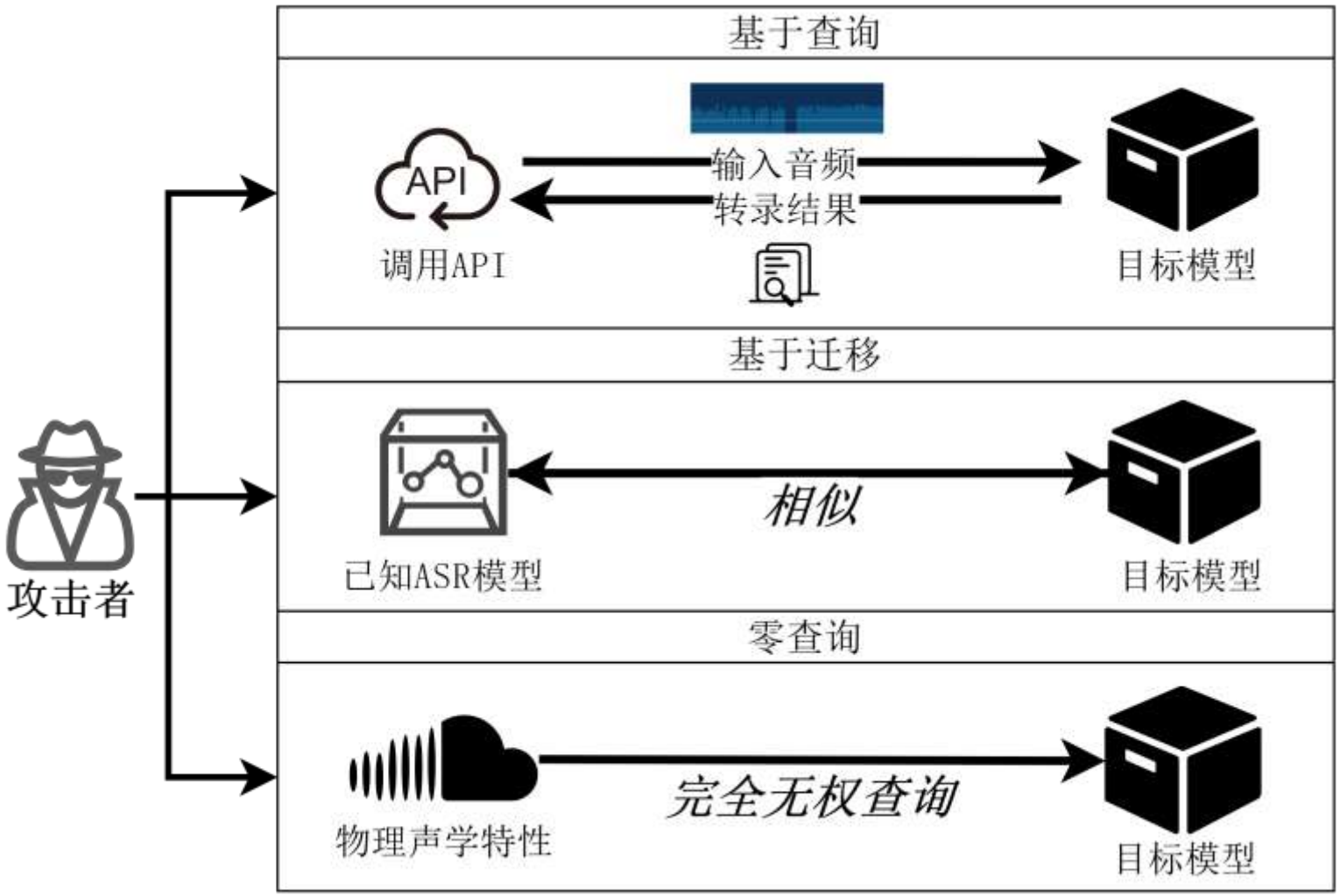
传统语音识别系统

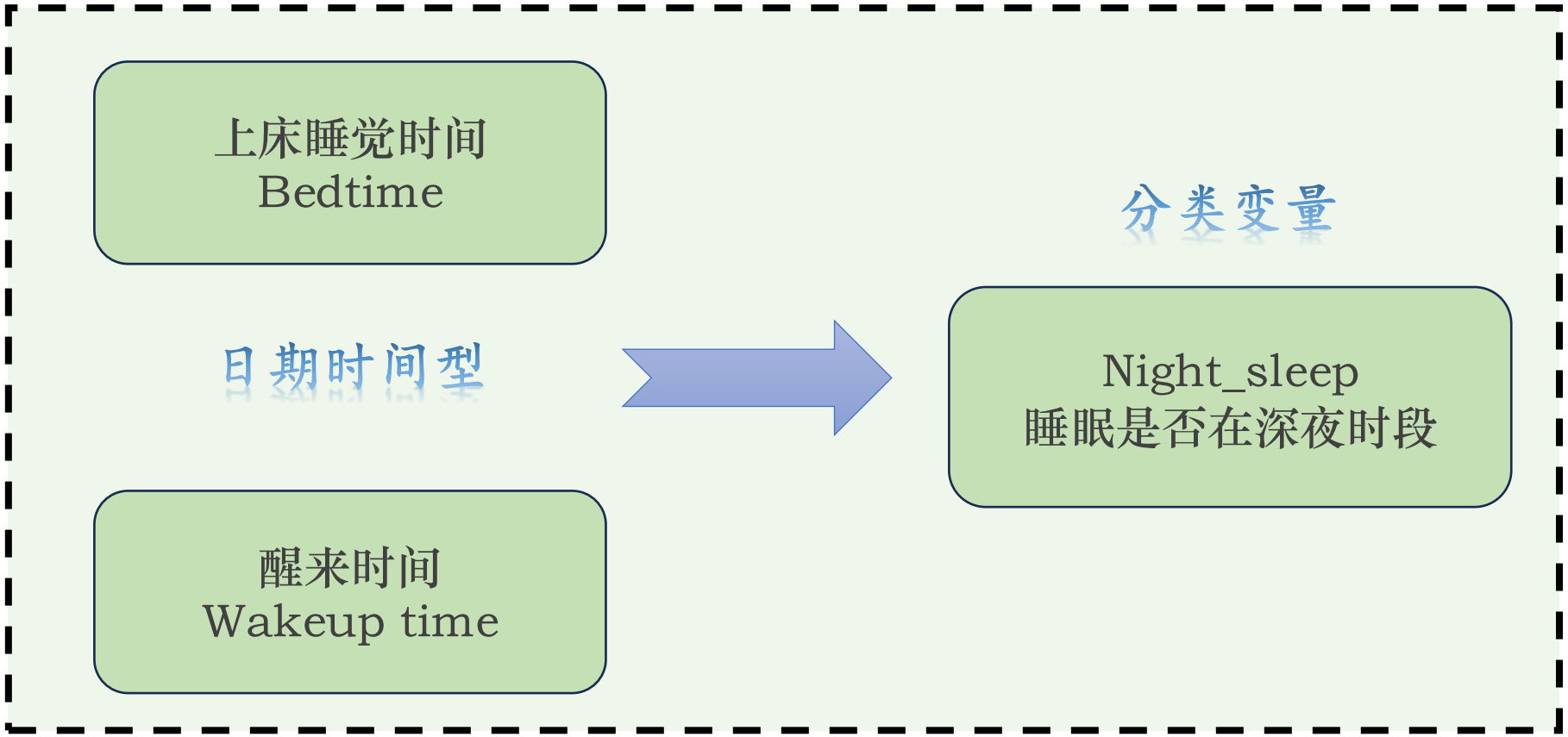
声学模型 ➡ 语言模型 ➡ 解码器

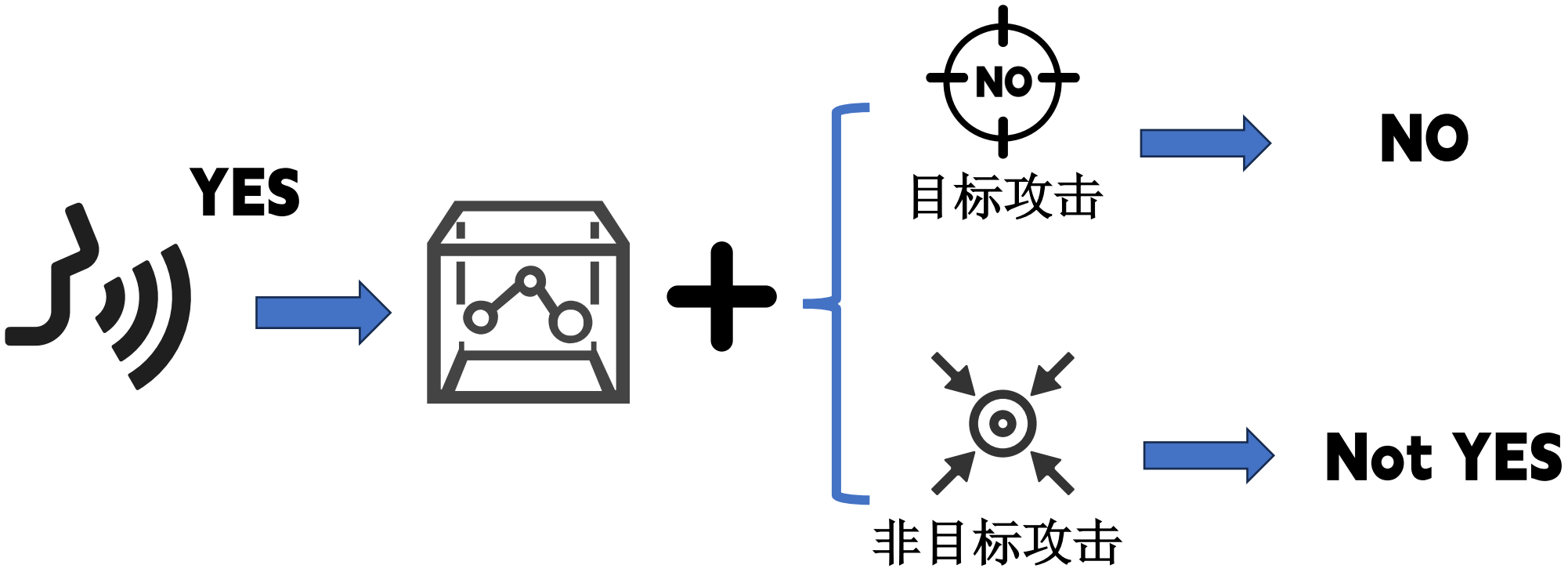
DNN-HMM 混合结构

统一神经网络结构模型

端到端传统语音识别系统
(End-to-End ASR)


基于查询
API
输入音频
转录结果
调用API
目标模型
基于迁移
相似
已知ASR模型
目标模型
攻击者
零查询
完全无权查询
物理声学特性
目标模型


上床睡觉时间
Bedtime
日期时间型
醒来时间
Wakeup time
分类变量
Night_sleep
睡眠是否在深夜时段


YES
NO
目标攻击
NO
非目标攻击
Not YES

构建合理权重体系

规划能力

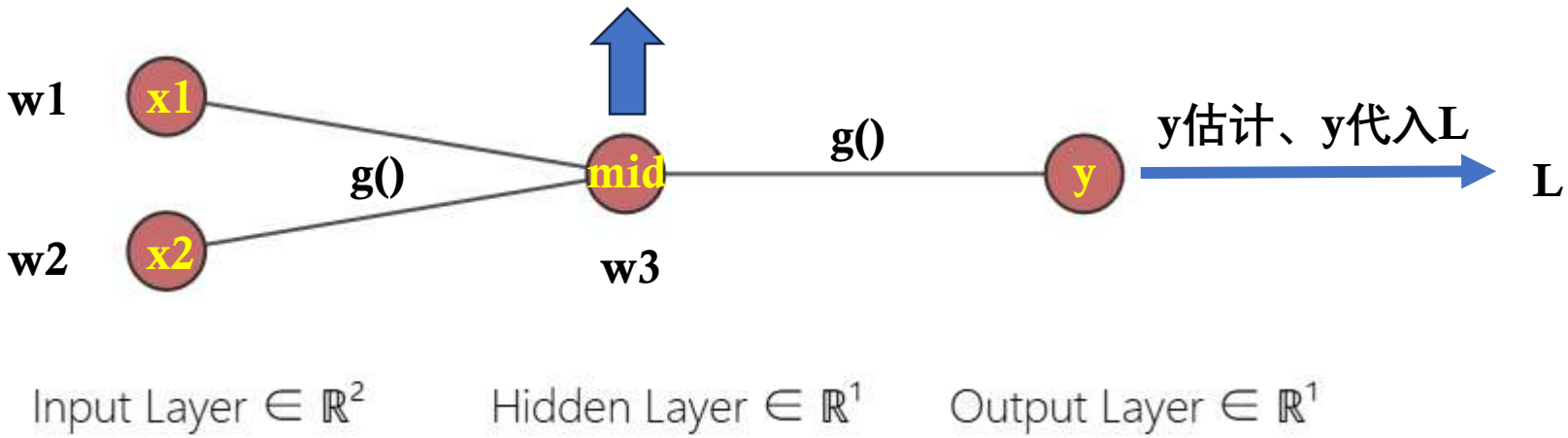
执行能力

反思能力

学习效果

学习表现

$$g(w_3 g(w_1 x_1 + w_2 x_2 + b_1) + b_2))$$

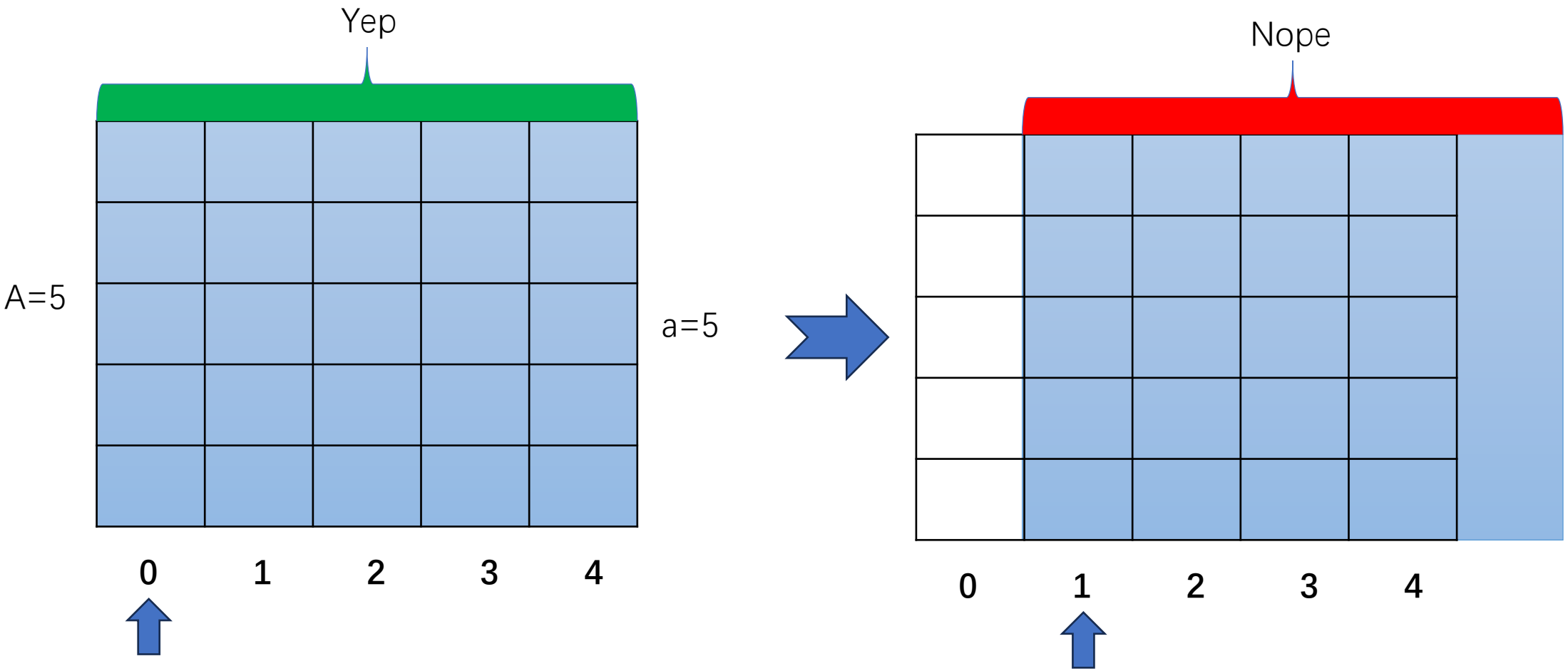



星火校友平台
欢迎回家
请完成身份认证以领取您的电子校友卡
贾书煜
2022
人脸识别一键认证
遇到问题？点击 人工申诉通道
校友卡
活动
捐赠

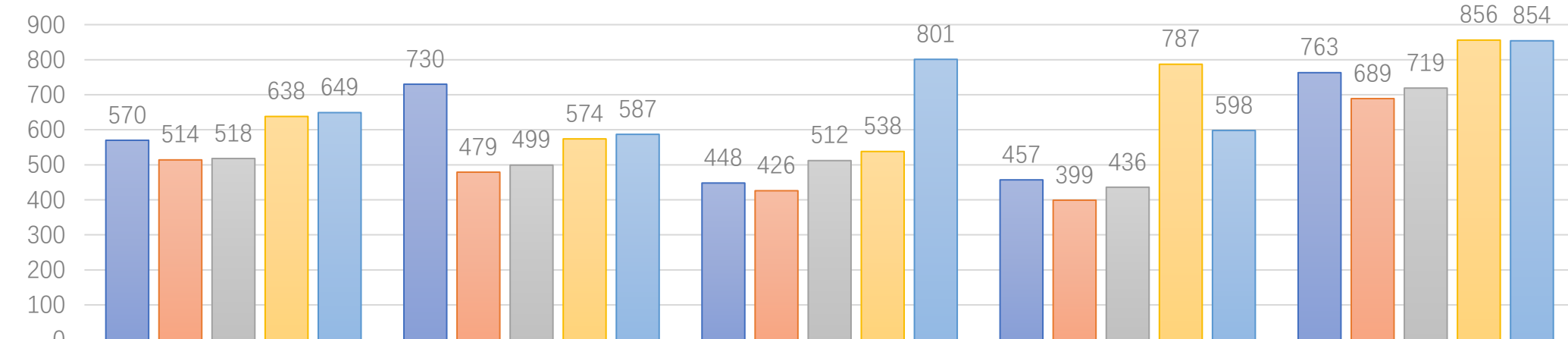

你好，贾书煜
2022级 · 理学院
ALUMNI CARD
动态防伪码
动态码：721697 (自动刷新)
凭此卡可进入图书馆、食堂
校友卡
活动
微捐赠


你好，贾书煜
2022级 · 理学院
2025届校友返校日
2025-05-20
母校大礼堂
一键报名
金融行业沙龙
2025-06-15
已报名
校友卡
活动
微捐赠

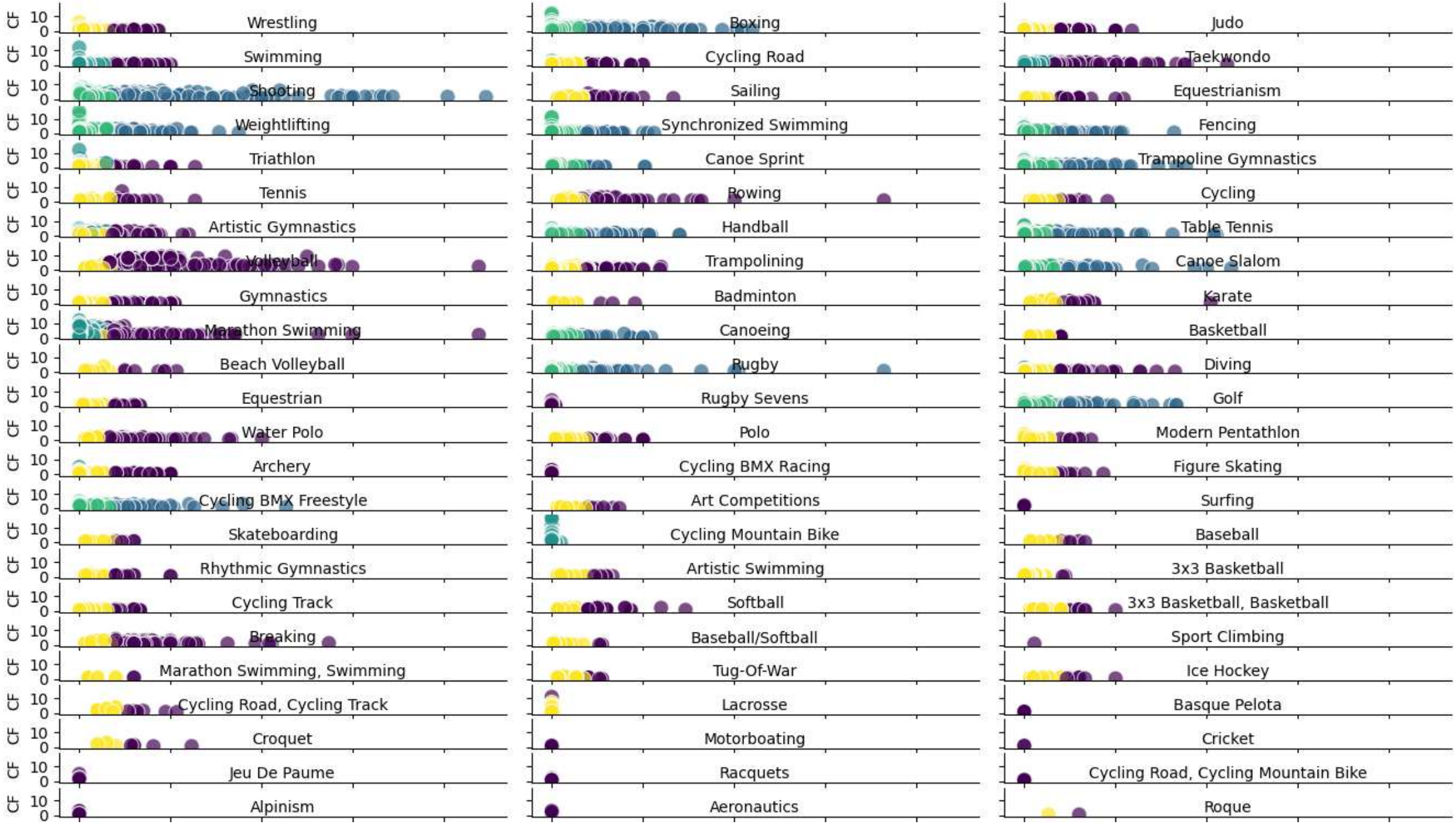

你好，贾书煜
2022级 · 理学院
年度微捐赠
￥19.9
￥99
立即捐赠
校友卡
活动
微捐赠


Yep
A=5
a=5
0
1
2
3
4
Nope
0
1
2
3
4

Histogram of the number of athletes from the last five major participating countries



	AUS	CHN	FRA	JPN	USA
2008	570	730	448	457	763
2012	514	479	426	399	689
2016	518	499	512	436	719
2020	638	574	538	787	856
2024	649	587	801	598	854


CF
10
0
Wrestling
Swimming
Shooting
Weightlifting
Triathlon
Tennis
Artistic Gymnastics
Volleyball
Gymnastics
Marathon Swimming
Beach Volleyball
Equestrian
Water Polo
Archery
Cycling BMX Freestyle
Skateboarding
Rhythmic Gymnastics
Cycling Track
Breaking
Marathon Swimming, Swimming
Cycling Road, Cycling Track
Croquet
Jeu De Paume
Alpinism
Boxing
Cycling Road
Sailing
Synchronized Swimming
Canoe Sprint
Rowing
Handball
Trampolining
Badminton
Canoeing
Rugby
Rugby Sevens
Polo
Cycling BMX Racing
Art Competitions
Cycling Mountain Bike
Artistic Swimming
Softball
Baseball/Softball
Tug-Of-War
Lacrosse
Motorboating
Racquets
Aeronautics
Judo
Taekwondo
Equestrianism
Fencing
Trampoline Gymnastics
Cycling
Table Tennis
Canoe Slalom
Karate
Basketball
Diving
Golf
Modern Pentathlon
Figure Skating
Surfing
Baseball
3x3 Basketball
3x3 Basketball, Basketball
Sport Climbing
Ice Hockey
Basque Pelota
Cricket
Cycling Road, Cycling Mountain Bike
Roque