

Digitalization and AI Applications in Higher Education

——THE CASE OF CHINA

Han Yangmei (Grace)

Deputy Director of Degree Division,
Center for Student Services and Development (CSSD),
Ministry of Education, P.R. China



Type

Public institution directly under
the Ministry of Education

Staff

330

Service

Provide support to MOE departments
and deliver public services to society

Function

The leading agency of NIC in
China

Founded: 1991

CSSD Introduction



Admission



**National College
Entrance Examination
(Gaokao) Registration**



**College
Application**

Gaokao Registration Platform and
College Application Information
System

Management



Uni Enrollment

Student Record
Registration



Uni Grade 2, 3, 4

Annual
Registration



Graduation

HE Qualification &
Degree Registration

Student Record and
Qualification Management Platform

Employment & Further Study



Employment

Employment
Platform



Further Study

Veri Application Platform



Higher Education Database

Data Service

5 Platforms



Student Record and
Qualification Management
Platform



Sunshine Gaokao



Graduate School
Admission



National College Student
Employment Service
Platform



The National College
Students Entrepreneurship
Service

Support

www.chsi.com.cn

China's Important Information Infrastructure



2025

Newly registered Users **33 million**

Admission



**National College
Entrance Examination
(Gaokao) Registration**



**College
Application**

**Gaokao Registration Platform and
College Application Information
System**



Database

College Application



Growing Need for personalized services in
college application counseling

College Application Information System

Professional orientation assessment

Interests

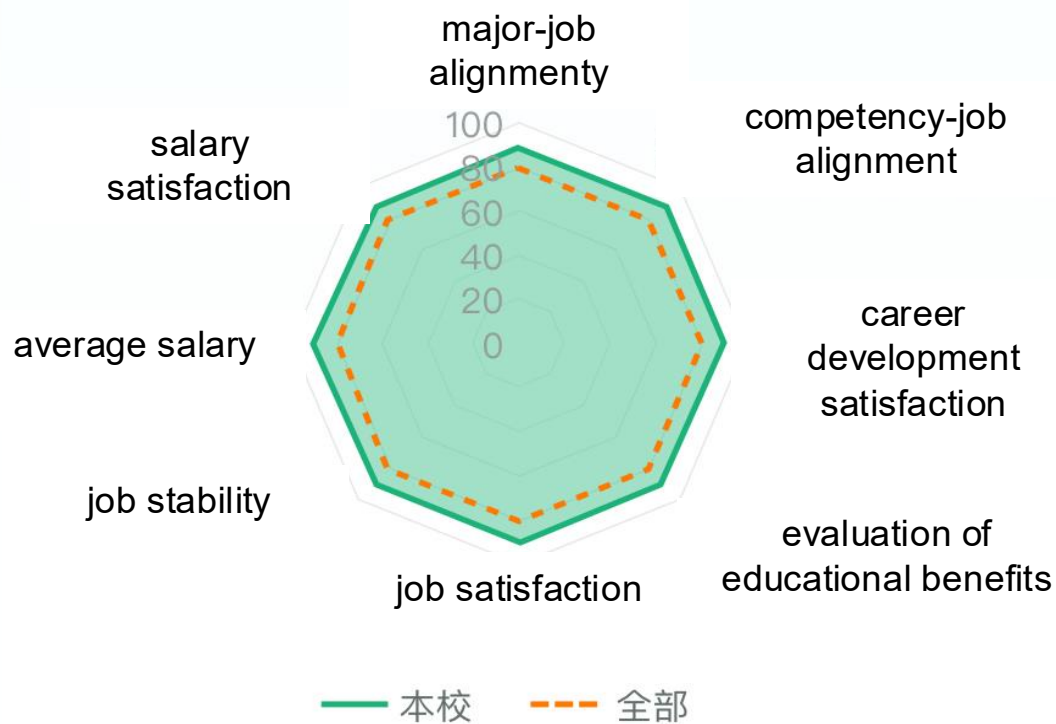
Personality

Academic
Tendencies

Personalized list of recommended universities and majors

The screenshot displays the '智能筛选志愿' (Intelligent Selection of Volunteering) section. It includes a header with '智能筛选志愿', '专业倾向测评', and '我的志愿报告'. Below the header, there are links for '重点领域专业需求' and '近两年本科新增专业一览'. A notice states: '本系统匹配筛选的院校和专业仅供参考, 考生须在本省志愿系统中按照要求正式填报志愿, 使用协议'. A yellow box contains the text: '北京教育考试院官方信息: 志愿填报参考服务网站 | 详情'. The main content area shows '你的高考信息' (Your College Entrance Exam Information) with '综合改革 (物理+化学+生物)' and '20000位' selected. There are buttons for '《志愿填报指南专题》' and '按以上条件筛选院校'. The '院校优先' (University Priority) section is active, showing a list of provinces and cities: 全部, 北京, 天津, 河北, 山西, 内蒙古, 辽宁, 吉林, 黑龙江, 上海, 江苏, 浙江, 安徽, 福建, 江西, 山东, 河南, 湖北, 湖南, 广东, 广西, 海南, 重庆, 四川, 贵州, 云南, 西藏, 陕西, 甘肃, 青海, 宁夏, 新疆. The '院校所在地' (University Location) section shows '全部' selected. The '主管部门类别' (Administrative Department Category) section shows '全部' selected. The '院校特性' (University Characteristics) section shows '全部' selected. There are buttons for '理想院校' (Ideal University), '添加' (Add), and '按以上条件筛选院校' (Filter universities by the above conditions).

Employment related data



Smart Admission Assistant—Xiaozhao

- Deep learning algorithms and LLMs
- Intelligent Q&A services in a conversational format



快捷提问

志愿推荐

高考百科

 个人信息

我的高考位次3694名，推荐天津的学校，电子信息专业



同学你好！很高兴为你提供服务。根据你提供的信息，高考所在地为北京，选考科目为物理，化学，生物，招生类型为普通类考生，科类名称为综合改革，高考位次为3694，报考批次为本科普通批，意向专业为电子信息，意向院校所在地为天津，为你提供以下志愿进行参考：

录取可能性	院校名称	专业名称	院校所在地	录取平均成绩		
				2024	2023	2022
较大	天津工业大学 双一流	(10)通信工程	天津	589分	587分	568分
较大	天津工业大学 双一流	(12)人工智能	天津	588分	587分	568分
较大	天津师范大学	人工智能(师范)	天津	532分	570分	557分
较大	天津城建大学	(28)人工智能	天津	481分	500分	499分
较大	天津理工大学中环信息学院	(21)通信工程	天津	444分	465分	453分
较大	天津仁爱学院	(23)通信工程	天津	434分	456分	443分
较大	北京科技大学天津学院	(48)人工智能	天津	430分	471分	456分

① 使用指南

开启新对话

发送问题



内容由大模型生成，仅供参考 意见反馈

Management



Uni Enrollment



Uni Grade 2, 3, 4



Graduation

**Student Record
Registration**

**Annual
Registration**

**HE Qualification &
Degree Registration**

**Student Record and
Qualification Management Platform**

Enrollment data



Database

Student Management Process and Mechanism



Uni Enrollment



Uni Grade 2, 3, 4



Graduation

Step	Student Record Registration	Annual Registration	Qualification & Degree Registration
What it does	Confirms the student actually enrolled	Updates status each year (suspended, transferred, dropped out, etc.)	Registers graduation certificate and degree
Simple meaning	"You are now a student."	"We keep track of changes."	"You graduated – and it's official."

Management Structure



HEI

3000+



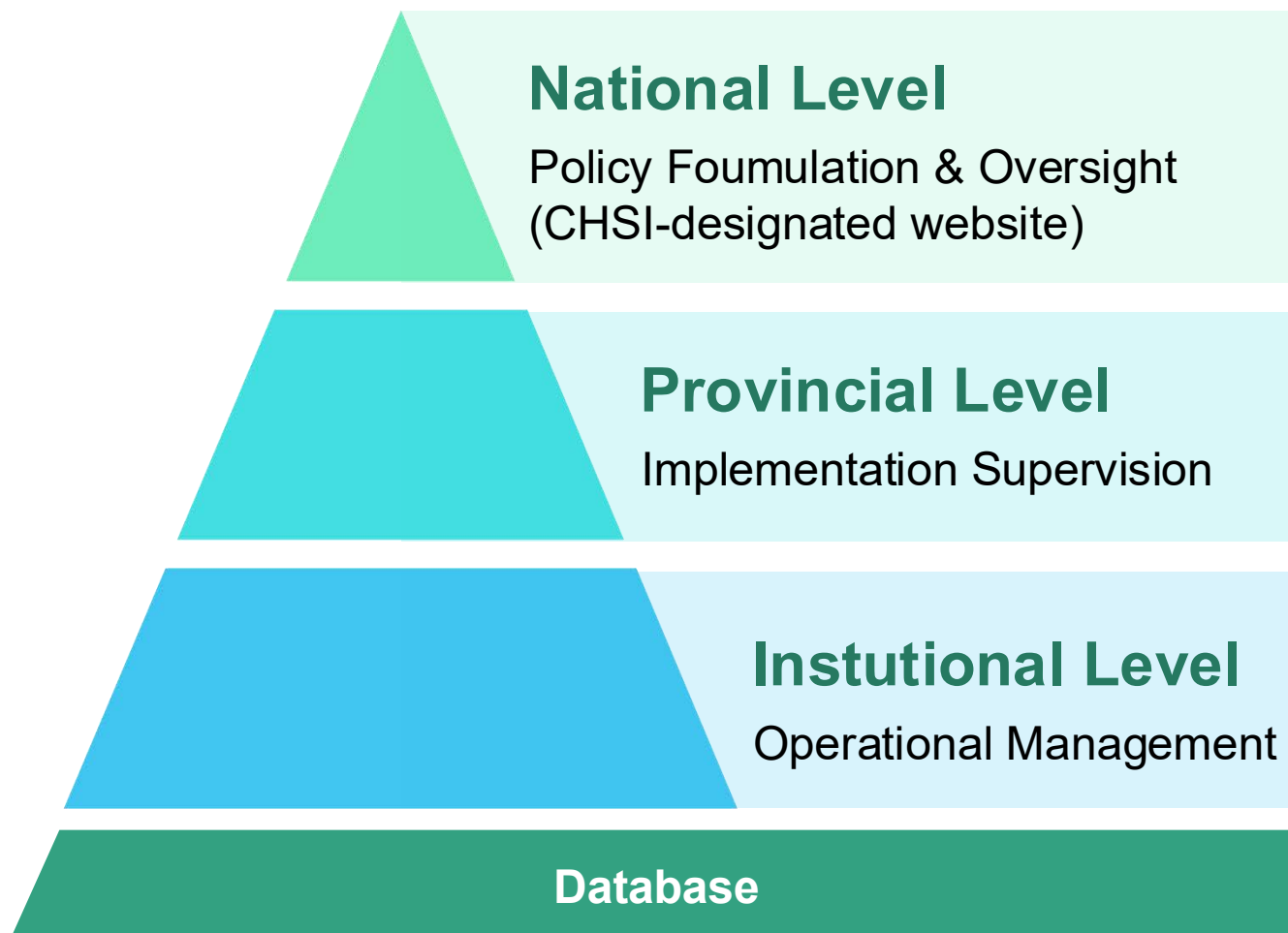
Graduates

10million



New Enrollments

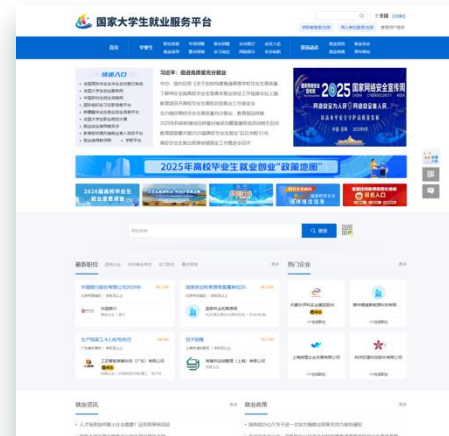
10million



The National Employment Priority Strategy



Student Career Platform



The National College Student Employment Service Platform

Employment & Further Study



Employment

Employment Platform

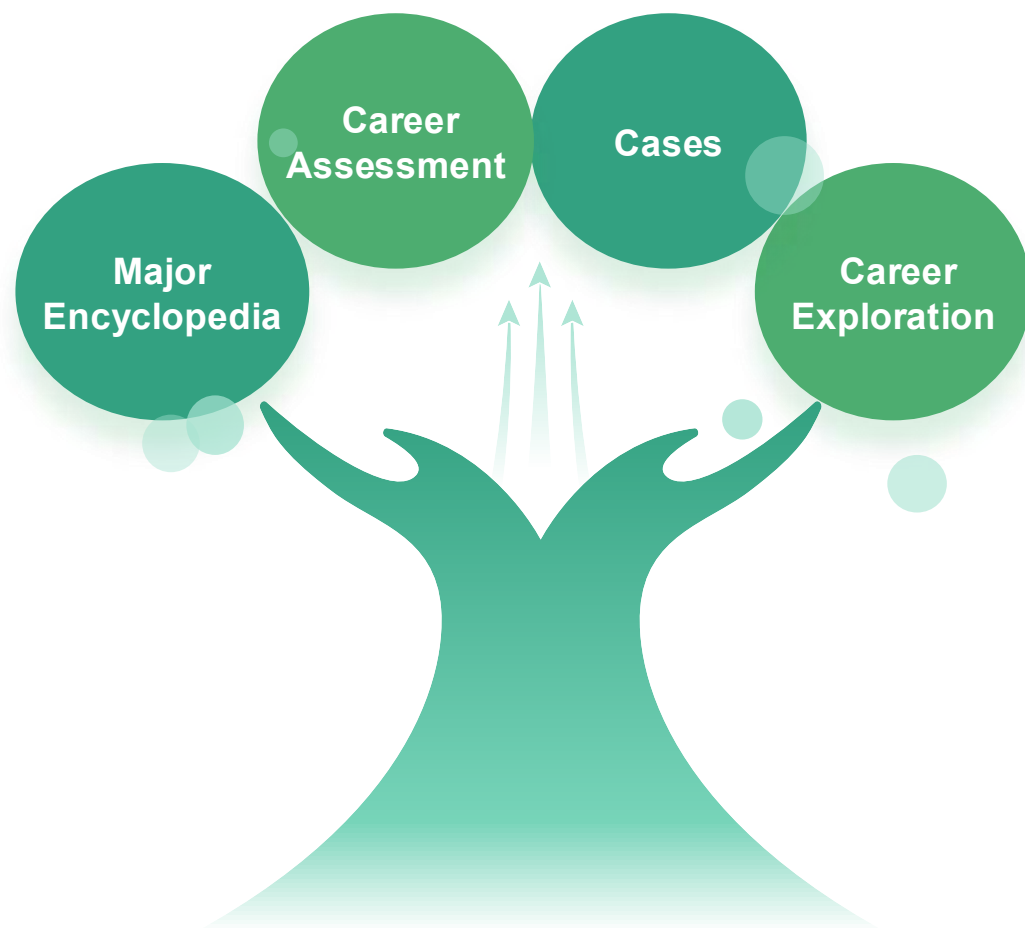


Further Study

Veri Application Platform

Data Service

Student Career Platform



学职平台 全国大学生学业与职业发展平台

登录注册

首页专业洞察职业测评职业探索职业人物职业微视频就业指导课



哪个才是我的选择?

专升本/考研

就业

职业资讯

更多 >

高校新专业，“新”在哪儿？
走近当年选择殡葬专业的00后学子
“00后”分享自己与古文学的故事 在南京大学“冷门绝学”...

学职报告

更多 >

热门高薪？金融类专业就业分析
写代码就能成为软件工程师？这可能不是同一件事！
电子商务类专业就是做主播吗？一组数据告诉你发展前景...

链接学生、高校和企业的纽带

依托大数据和大平台，搭建学生、高校和企业三位一体平台，为学生选择专业、择业、就业，高校人才培养、选拔、就业指导，以及企业人才储备、招聘提供全面专业的服务，使信息在内部实现有效反馈和循环利用。



洞察专业脉络

涵盖本科和专科共千余专业方向，创新性地将专业与从业方向相结合，设置课程的实用性和难易度评分，为学生选择专业提供多个维度观察，同时将职业生涯规划前置至专业选择阶段。



发现职业自我

好的工作必定是适合的工作，在适合的岗位上工作会如鱼得水，反之则如涸辙之鲋，作为职业生涯的起点，职业测评为你提供的是你与职业的适配性，帮助你更好地进行自身的职业定位。



探索职业世界

囊括23类112个职业方向，每个词条下含11个条目，涵盖职业定义、岗位职责、工作环境、发展路径、工作者的一天等，内容详实全面，指导性和借鉴性强，为学生快速了解目标职业、进行职业选择提供有力的信息支持。

职业测评为你真正了解自己打开一扇窗口

所谓“知己知彼，百战不殆”，只有在充分了解和对方的基础上，才能做出明晰的判断和正确的选择。利用专业的测量工具，职业测评为你真正了解自己打开一扇窗口，向着亮的地方，来遇见未知的自己吧。

开启探索之旅

Student Career Platform

Career Assessments 44

Interests/Personalities

Attitudes/Evaluations

Abilities/Qualities

Careers/Decisions

Abilities/Qualities

Basic Abilities

Self-management

Task Execution

Interpersonal Relationships

Teamwork

Innovation and Entrepreneurship

Assessments completed 30M

The screenshot displays the XueZhi Platform (学职平台) website, a national platform for university students' career development. The header includes the platform's name and navigation links: 首页 (Home), 专业洞察 (Professional Insights), 职业测评 (Career Assessment), 职业探索 (Career Exploration), 职业人物 (Career Figures), 职业微视频 (Career Micro-videos), and 就业指导课 (Career Guidance Course). The main content area features a large banner titled "什么是你真正热爱的工作?" (What is the job you truly love?) with a subtext explaining the platform's collaboration with experts from top universities like Peking University and Tsinghua University to develop assessment tools. Below the banner are four promotional cards: "看见未知的自己" (See the unknown self), "充满未知和无限可能的大学生活指南" (University life guide full of unknowns and infinite possibilities), "2024开学季 查看新生规划路线图" (2024 New Semester, View the new student planning route map), and "对抗'盲目考证' 你需要了解这些重要职业资格证书" (Against 'blind certification', you need to know these important professional qualification certificates). The right sidebar lists several assessments: "主动性人格测试" (Proactive Personality Test) by Peking University, "大五人格测试" (Big Five Personality Test) by Peking University, "职业兴趣测评" (Career Interest Assessment) by Nanjing Normal University, and "专业认同度测试" (Professional Identification Test) by Peking University. Each assessment card includes a brief description, the number of users who have taken the test, and a button to "进入测评" (Enter Assessment).

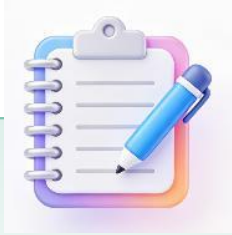
The National College Student Employment Service Platform

Xiaoye deeply integrates domestic LLM technologies to deliver AI-powered employment services.

/// **Conversational AI-powered Job Search**

/// **AI-driven Career Guidance Services**





**Academic
Transcript**



**Qualification
Certificate**



**Degree
Certificate**

**Unified
Procedures**

**Unified
Basis**

**Unified
Report
Formats**

**Unified
Authentication
Website**

**Employment &
Further Study**



Employment
Employment
Platform



Further Study
Veri Application Platform

Data Service

Online Verification Report

教育部学籍在线验证报告 样本

更新日期: 2023年01月09日

姓名	张三
性别	女
出生日期	1992年02月12日
民族	汉族
证件号码	1201061910021
院校	北京林业大学
层次	专科
院系	33
班级	报关专1000
专业	商品花卉
学号	1020110201
学制	3年
类型	普通高等教育
形式	普通全日制
入学日期	2010年09月01日
学籍状态	毕业 (毕业日期: 2013年06月01日)

在线验证报告

① 验证报告 ② 使用学籍

注意事项:

- 《学籍在线验证报告》是教育部学籍查询的唯一凭证。
- 报告内容如有变更, 请及时更新在线验证报告。
- 未经学籍管理部门同意, 不得擅自修改。
- 报告在生成后有效期为6个月, 逾期无效。

Online Verification Report of Student Record

Date of Renewal: Jan. 09, 2023 Date of Expiry: Jan. 08, 2024

Name	ZHANG SAN
Sex	Female
Date of Birth	Feb. 12, 1992
Ethnic Background	Chinese
ID No.	120106191002100220
Higher Education Institution	Beijing Forestry University
Education Level	Junior College
Major	Goods Flowers
Length of Program	3 Years
Type of Education	Regular Higher Education
Form of Learning	Full Time
Start Date	Sep. 01, 2010
Status of Student Record	Graduated
Graduation Date	Jun. 19, 2013

Online Verification Code: 855025354932

① Online authentication of the report can be made at <https://www.chsi.com.cn/xcx/>

② or scan the QR code by 学信网 App.

Notes:

- For more information about "Type of Education", "Education Level", "Form of Learning", "Anticipated Graduation Date" and "Status of Student Record", please visit <https://www.chsi.com.cn/xcx/service/make.asp>.
- Online Verification Report of Student Record is the verification result of the student record database managed by MOE.
- The report is subject to change. Please use the latest version of the report.
- The report shall not be used for other purposes without the consent of its owner.
- The online verification validity of the report is 1 year and can be extended before the report is expired by the report owner.

CHSI

HE Student Record
(studying proof)

教育部学历证书电子注册备案表 样本

更新日期: 2023年01月09日

姓名	张三
性别	女
出生日期	1979年07月
入学日期	1998年09月
毕业 (结) 业日期	2001年07月
学校名称	北京林业大学
专业	商品花卉
学制	3年
层次	专科
学历类别	普通高等教育
学习形式	普通全日制
毕业 (结) 业	毕业
证书编号	1002 2120 1
校 (院) 长姓名	李四

在线验证报告

① 验证报告 ② 使用学籍

注意事项:

- 教育部学历证书电子注册备案表 (简称学历证书电子注册备案表) 是教育部学历证书查询的唯一凭证。
- 备案表内容如有变更, 请及时更新在线验证报告。
- 未经学籍管理部门同意, 不得擅自修改。
- 报告在生成后有效期为6个月, 逾期无效。

Online Verification Report of Higher Education Qualification Certificate

Date of Renewal: Jan. 09, 2023 Date of Expiry: Jan. 08, 2024

Name	ZHANG SAN
Sex	Female
Date of Birth	Jul. 02, 1979
Start Date	Sep. 01, 1998
Completion Date	Jul. 01, 2001
Higher Education Institution	Beijing Forestry University
Major	Goods Flowers
Length of Program	3 Years
Education Level	Junior College
Type of Education	Regular Higher Education
Form of Learning	Full Time
Status	Graduated
Certificate No.	1002 2120 0106 9999 99
President Name	LI SI

Online Verification Code: 962712969302

① Online authentication of the report can be made at <https://www.chsi.com.cn/xcx/>

② or scan the QR code by 学信网 App.

Notes:

- For more information about "Type of Education" and "Education Level", please visit <https://www.chsi.com.cn/xcx/service/make.asp>.
- This verification report is based on the re-check result of the qualification certificate electronic registration information in accordance with the Regulation of Higher Education Student Record and Qualification Registration [Ministry Order (2014) 11]. It should be CHSI (<http://www.chsi.com.cn>), the only MOE-designated qualification authentication website, that conducts online verification service.
- The report is subject to change. Please use the latest version of the report.
- The report shall not be used for other purposes without the consent of its owner.
- The online verification validity of the report is 1 year and can be extended before the report is expired by the report owner.

CHSI

HE Qualification Certificate

中国高等教育学位在线验证报告 样本

更新日期: 2022年04月05日

姓名	张三
性别	男
出生日期	1982年07月
获学位日期	2009年06月
学位授予单位	北京林业大学
所授学位	管理学学士
学科专业	农林经济管理
学位证书编号	XXXXXX0000

在线验证报告

① 验证报告 ② 使用学籍

注意事项:

- 报告内容如有变更, 请及时更新在线验证报告。
- 学位证书信息查询权归本人所有, 不得擅自修改。
- 报告在生成后有效期为6个月, 逾期无效。

Online Verification Report of Higher Education Degree Certificate

Date of Renewal: Jun. 25, 2022 Date of Expiry: Dec. 19, 2029

Full Name	ZHANG SAN
Gender	Male
Date of Birth	Jul. 23, 1982
Degree Awarding Date	Jun. 11, 2009
Degree-conferring Unit	Beijing Forestry University
Degree Awarded	Bachelor of Management Sciences
Major	Agricultural and Forestry Economy Management
Certificate No.	XXXXXX0000XXXXXX

Online Verification Code: X0EN000000SAMPLE

① Online authentication of the report can be made at <https://www.chsi.com.cn/xcx/>

② or scan the QR code by 学信网 App.

Notes:

- The report is subject to change. Please use the latest version of the report.
- The report shall not be used for other purposes without the consent of its owner.
- The online verification validity of the report can be set from 1 to 6 months and extended before the report is expired by the report owner.

CHSI

HE Degree Certificate

E-Qualification System

2002



Manual Verification

Verification Service
based on archive records



Automatic Verification

E-registration System
submitted to the database

Data Services



For Students

- Free inquiry and verification services
- Employment and further study



For the Education Sector

- Educational background verification
- Authorization service model
- CHSI APP- QR code



For Government and Public Welfare

- National Data Sharing and Exchange Platform
- Student record, qualification, degree data



International Digitalization Cooperation



Groningen
Declaration



Global Partners and Users

Europe



Africa



Oceania



Asia



North America



UNESCO Vision

- Fair
- Transparent
- Non-discriminatory



Trustworthy Data Governance

CHINA'S Approach

- Full digitalization of the student lifecycle
- National higher education database
- Secure data exchange with global partners



UNESCO Prize for ICT in Education



Smart Education of China



Thank You

Presenter: Han Yangmei (Grace)

