

# Research on the Employment Guidance Service Model for University Counselors Empowered by Generative AI

Yifan Zhang<sup>1</sup>, Xiaoyu Fei<sup>1,\*</sup>

<sup>1</sup>Wenzhou Medical University, Wenzhou 325000, China

\*Corresponding author email: 895861458@qq.com

**Abstract:** The employment guidance work of college counselors is confronted with three dilemmas: outdated concepts, insufficient professional capacity, and limited service supply. The traditional experience-driven model struggles to meet the individualized needs of contemporary students. Generative Artificial Intelligence (AI), with its robust capabilities in data analysis and content generation, offers a crucial technological solution to these challenges. This paper first analyzes the practical value of generative AI in enhancing employment guidance. Subsequently, it proposes a four-in-one employment guidance service model—"Precise Profiling - Intelligent Matching - Full-process Companionship - Competency Training"—with the counselor as the principal agent and AI as the technical backbone. This model facilitates the digital representation of student characteristics, the precision delivery of job information, phased design of guidance services, and systematic training of job-seeking skills. By establishing a closed-loop service that spans the entire student lifecycle, this study aims to drive the transformation of employment guidance toward a data-driven and precision service paradigm, thereby providing both theoretical reference and practical guidance for improving the quality and efficiency of career education in higher education institutions.

**Keywords:** Generative AI; University Counselor; Employment Guidance; Human-Machine Collaboration.

## 1. Introduction

Employment is the foundation of people's livelihood, and the employment of university graduates is a paramount priority. Currently, due to a confluence of domestic and international factors, the domestic job market is facing an unprecedented level of complexity. On the one hand, the total labor supply remains substantial, with concentrated demand from key groups such as university graduates and migrant workers exerting continuous pressure on overall employment level. On the other hand, structural contradictions in employment have become increasingly pronounced. The rapid advancement of new technologies, notably artificial intelligence, is driving a restructuring of the labor market, resulting in a mismatch between the contraction of traditional sectors and insufficient supply in emerging industries[1]. In April 2025, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issued the Opinions on Accelerating the Construction of a High-Quality Employment Service System for Graduates of Regular Higher Education Institutions, which explicitly calls for "strengthening the employment guidance system" and "promoting new models of digital employment services," emphasizing the integration of career education throughout the entire educational process. In April 2026, the Ministry of Education and four other departments issued the "Artificial Intelligence + Education" Action Plan, further underscoring the need to "promote the integration of intelligent technology with all educational elements, throughout the entire process, and across all scenarios," and to "create an intelligent employment service system to realize intelligent job recommendations for university students, thereby fostering high-quality and full employment." These policy directives clearly chart the course for AI-empowered employment guidance services in higher education.

Against this backdrop, university counselors, as frontline practitioners of student employment guidance, are

confronting unprecedented challenges in their role definition and competency structure. Under the traditional model, a single counselor is often responsible for providing a comprehensive suite of services—including career planning, information dissemination, skills training, and psychological support—to hundreds of students. This experience-driven, homogeneous approach is no longer adequate to meet contemporary students' demands for personalized, real-time, and precision services, nor can it effectively address the profound impact of intelligent technologies on career trajectories[2]. In contrast, generative AI models (e.g., ChatGPT, DeepSeek), characterized by their powerful capabilities in text generation, knowledge synthesis and transfer, multi-scenario application creation, and data analytics, can be deeply embedded within the university employment service chain. They possess the potential to reshape the logic of job market perception, student competency identification, career path planning, and supply-demand matching, thereby driving a fundamental shift from empirical judgment to data-driven decision-making[3].

Therefore, an in-depth investigation into the employment guidance service model for university counselors, as empowered by generative AI, holds significant theoretical and practical implications for enhancing the precision, personalization, and effectiveness of career guidance and ultimately promoting high-quality and full employment for university students.

## 2. Predicaments in University Counselors' Employment Guidance Work

Current employment guidance efforts by university counselors are constrained by a threefold predicament concerning philosophy, capacity and supply.

## **2.1. Conceptual Lag: Cognitive Dissonance Between Experience-Driven Practice and the Intelligent Era**

Some counselors' understanding of employment guidance remains confined to the level of transactional management, yet to make the conceptual shift toward developmental services. First, there is insufficient awareness of the labor market trends being reshaped by AI technology, resulting in a disconnect between guidance content and market realities[4]. Second, a cognitive bias exists regarding the value of intelligent tools, which are often perceived merely as auxiliary aids for information dissemination. An entrenched belief in the superiority of “traditional experience over algorithms” persists[2], leading to the neglect of technology's central role in enabling precise decision-making.

## **2.2. Capability Gap: Dual Deficiencies in Professional and Technological Literacy**

Counselors' employment guidance competencies exhibit a dual deficiency in professional specialization and technological literacy. On the professional front, many counselors lack practical corporate experience and systematic training in career consultation. Their guidance tends to remain at the level of “knowledge transmission” rather than facilitating “competency construction”[5]. On the technological front, counselors generally demonstrate weak capabilities in data retrieval, intelligent platform operation, and data interpretation. Surveys indicate that a majority cannot independently conduct job matching analysis and require assistance from technical staff. This lack of technological proficiency not only constrains service efficiency but also carries the risk of data misinterpretation that may lead to misguided advice.

## **2.3. Limited Supply: Systemic Contradiction Between Standardized Services and Personalized Needs**

Given the structural constraint of a typical student-to-counselor ratio of 200:1 or higher, a systemic tension exists between service supply and student demand. In terms of breadth, large-scale, standardized guidance is unable to address individualized needs for tailored, one-on-one support, leading to significant homogenization of services. In terms of depth, transactional tasks encroach upon the time and energy required for higher-value activities such as values education, psychological counseling, and career awakening. In terms of timeliness, intermittent, phase-specific guidance fails to provide the continuous, full-process companionship needed to keep pace with dynamic market changes and individual student developmental rhythms[6].

# **3. Application Value of Generative AI in University Counselors' Employment Guidance**

With its capabilities in natural language understanding, multimodal content generation, and deep data analysis, generative AI injects new technological momentum into university counselors' employment guidance work. Its application value is primarily manifested across four dimensions.

## **3.1. Data-Driven Enhancement: Cognitive Upgrade from Empirical Judgment to Intelligent Decision-Making**

Traditional employment guidance relies heavily on the counselor's personal experience and limited information, making scientific rigor and foresight difficult to guarantee. Generative AI, through the integration and intelligent analysis of multi-source data, facilitates a paradigm shift from experience-driven to data-driven cognition.

### **3.1.1. Precise Construction of Student Profiles**

Generative AI can integrate multidimensional data, including academic performance, internship experience, career assessment results, and behavioral trajectories, to generate dynamic student competency profiles. This provides a data-rich foundation for personalized guidance[4]. For instance, the “AI Career Navigation System” developed by the Beijing Institute of Technology analyzes student research projects and extracurricular activity data to predict career inclinations, achieving a matching accuracy rate of 79%.

### **3.1.2. Dynamic Monitoring of the Job Market**

Generative AI can continuously collect and monitor job demand data from major recruitment platforms, industry reports, and policy documents in real time. It analyzes industry trends and shifts in skill requirements, furnishing counselors with visualized market analysis reports[6]. For example, the employment monitoring system established by Nanjing Vocational University of Industry Technology tracks regional job demand changes in real time, enabling the institution to adjust curriculum and practical training content accordingly—an intervention that has led to an 18% increase in graduate employment rates for related majors.

### **3.1.3. Algorithmic Recommendation for Person-Job Fit**

AI systems perform multi-dimensional matching calculations between student competency profiles and a knowledge graph of job requirements. This transcends the traditional, singular matching logic based solely on “major of study,” shifting toward a precise alignment between composite competencies and job demands. A case in point is Wenzhou University's “AI Career Path” application, which aggregates over five million pieces of employment data and intelligently pushes approximately 150,000 job postings daily, achieving the aggregation and intelligent recommendation of job opportunities from multiple platforms within a single interface[7].

## **3.2. Service Efficiency Enhancement: Model Optimization from Transactional Execution to Precision Provision**

Through the deployment of intelligent tools, generative AI facilitates a transformation of employment guidance services from standardized provision to precise and personalized delivery.

### **3.2.1. Intelligent Resume Optimization**

AI-powered resume diagnostic tools can automatically extract skill keywords, assess alignment with target job descriptions, and provide structured recommendations for revision. A pilot program at Shanghai Jiao Tong University demonstrated a 35% increase in resume screening pass rates following AI optimization. Similarly, practice at Northeast Forestry University showed that student resumes optimized by AI diagnostics saw their pass rates improve from 45% to 78%[8].

### 3.2.2. Simulated Interview Training

Virtual interview systems built on generative AI can simulate interviewers with diverse styles, generate targeted questions based on a student's resume and target position, and provide real-time, multi-dimensional feedback on verbal expression, logical structure, and emotional state. For instance, the “Metaverse Interview Chamber” at Shenzhen Polytechnic simulates high-pressure group interview scenarios typical of multinational corporations, resulting in a 26% improvement in student interview success rates.

### 3.2.3. Round-the-Clock Consultation Services

AI employment assistants offer round-the-clock online support, handling fundamental inquiries related to policy interpretation, job information, and procedural guidance. This overcomes the temporal and spatial limitations inherent in traditional guidance models[9]. The AI employment assistant at Zhejiang Normal University provides a comprehensive suite of services including policy clarification, job matching, and job search training, effectively mitigating the service delivery burden on counselors.

## 3.3. Role Liberation: Functional Reconfiguration from Sole Executor to Human-Machine Collaborator

The integration of generative AI is not intended to supplant the professional value of counselors but rather to catalyze a transformation and elevation of their roles through human-machine collaboration.

### 3.3.1. Technical Undertaking of Transactional Tasks

By handling standardized and repetitive tasks such as initial information filtering, resume screening, and basic policy inquiries, AI frees counselors to dedicate their finite time and cognitive resources to more complex and nuanced activities, including in-depth career counseling, psychological support related to job search anxiety, values clarification, and complex decision-making guidance[10].

### 3.3.2. Closed-Loop Mechanism for Human-Machine Collaboration

A collaborative workflow characterized by “AI as First Responder - Human Intervention for Complex Cases - Feedback Loop Optimization” is established. Students initially receive foundational services from the AI system. Complex or nuanced needs are then escalated to a counselor for in-depth, personalized intervention. Insights and resolutions from these human interactions are subsequently recorded and used to refine and update the AI's knowledge base, continuously enhancing its service capabilities[11]. This collaborative mechanism harnesses the efficiency of technology while preserving the essential warmth and depth of human-centered education.

### 3.3.3. Reclamation and Reinforcement of Professional Value

Within the human-machine collaborative paradigm, counselors transition from being “sole executors” to “collaborative orchestrators.” Their role is redefined along four key dimensions: facilitators of career exploration, integrators of information resources, providers of targeted support for employment-related stress, and coaches for essential job-seeking skills. This represents a profound evolution from a transaction-focused to a technology-empowered role[12].

## 3.4. Full-Process Coverage: Systemic Extension from Episodic Intervention to Lifecycle Companionship

Traditional employment guidance often manifests as a “last-minute sprint” of services concentrated in the senior year, neglecting the importance of early career awareness and long-term competency development. Generative AI enables a fundamental shift from episodic intervention to continuous, lifecycle-long companionship.

### 3.4.1. Four-Year Lifecycle Companionship

AI systems can facilitate an integrated service framework that spans the entire undergraduate experience: career orientation in the first year, foundational skill development in the second year, practical experience and enhancement in the third year, and precision job placement support in the senior year. By continuously tracking student growth data, the system can dynamically adjust guidance strategies, ensuring comprehensive coverage from matriculation through graduation.

### 3.4.2. Proactive Identification of Psychological Well-being

By analyzing behavioral data and linguistic cues indicative of emotional states, AI systems can identify early warning signals of job search-related stress. This enables the establishment of a tiered alert system and a differentiated intervention protocol[6], shifting the paradigm from reactive response to proactive prevention.

### 3.4.3. Post-Graduation Longitudinal Tracking

Leveraging an alumni big data platform, the system can continuously collect information on graduates' career trajectories. This feedback loop channels valuable labor market intelligence back into the talent development process, creating a continuous improvement cycle of cultivation, employment, feedback, and refinement. This not only enhances the quality of talent cultivation but also improves employment outcomes, extending the purview of employment guidance from a “terminal service” to a “lifelong support” model[13].

## 4. Construction of a Generative AI-Empowered Employment Guidance Service Model for Counselors

Addressing the current predicaments in university employment guidance necessitates the construction of a new service model that is congruent with the specific affordances of generative AI technology. This paper proposes a four-in-one employment guidance service model—“Precise Profiling - Intelligent Matching - Full-process Companionship - Competency Training”—with the counselor as the principal agent and generative AI as the core technological enabler.

### 4.1. Precise Profiling: Digital Representation of Student Career Characteristics

Precise profiling aims to equip counselors with a comprehensive digital dossier of a student's career development profile, thereby resolving the issue of insufficient evidence for decision-making that stems from fragmented and siloed information.

At the data collection level, profiles integrate three categories of information: first, basic capability information, including structured data reflecting students' professional

competence such as academic performance, skill certificates, scientific research competitions, and internship practice; second, career tendency information, obtained through tools such as the Holland Vocational Interest Test, MBTI Personality Assessment, and values scales to capture students' psychological characteristics and career preferences; third, behavioral trajectory information, tracking students' browsing records on employment platforms, job collections, resume update frequency, and other behavioral data.

At the data integration level, current university student data is dispersed across different systems such as academic affairs, student affairs, and employment offices, making it difficult for counselors to quickly obtain complete information[14]. Therefore, it is necessary to establish a unified data integration mechanism to standardize and centrally present multi-source information, facilitating counselors' one-stop access to complete student profiles.

At the dynamic update level, profiles continuously iterate with students' learning progress and job-seeking behavior changes, enabling counselors to track students' growth trajectories and employment preparation status, and promptly identify problems such as lagging career planning or wavering goals.

#### **4.2. Intelligent Matching: Precision Dissemination of Job Information and Person-Job Fit**

Intelligent matching is designed to assist counselors in identifying suitable job opportunities from the vast ocean of employment information, addressing the problems of information overload and the inefficiency of manual filtering.

At the matching logic level, the system performs multi-dimensional comparisons between the student's profile (including academic background, skill tags, internship experience, and career preferences) and the requirements of available job postings. It automatically identifies positions with high compatibility scores. As noted by Xin Fengjuan[15], recommendations can be generated based on similarities in interests, competencies, and job search history, while simultaneously analyzing the semantic congruence between resume keywords and job descriptions. This approach transcends the simplistic logic of "matching by major," as it is capable of identifying transferable skills—for instance, recognizing that the data analysis skills honed in a scientific research project are highly relevant to a market research role.

At the results presentation level, matching outcomes are displayed in a format that is both comprehensible to the counselor and actionable for the student. This includes an overall fit score, a breakdown of key alignment points, and an identification of any competency gaps. The counselor then conducts a secondary, qualitative review of the system's recommendations, applying their contextual understanding of the student's personality, family background, and psychological state to ensure the final recommendations are both targeted and appropriate.

At the feedback optimization level, student responses to the recommended positions (e.g., application submitted, interview secured, offer extended) serve as feedback signals that are ingested back into the system. This data is used to continuously refine and improve the precision of future recommendations. A notable example is the "AI Career Navigator" system developed by Wenzhou University, which integrates job data from multiple platforms to enable precise person-job matching and personalized recommendations.

This system intelligently pushes approximately 150,000 jobs daily and has generated over 7,000 individualized guidance plans, significantly contributing to an increase in the graduate employment rate.

#### **4.3. Full-process Companionship: Phased Design and Dynamic Follow-up in Employment Guidance**

Full-process companionship extends the scope of employment guidance from a concentrated effort in the senior year to a continuous support system throughout the entire university experience, addressing issues of delayed guidance and lack of continuity.

At the phase delineation level, the early years emphasize career awareness and awakening. Counselors facilitate activities such as career assessments, industry lectures, and corporate site visits to help students establish preliminary career consciousness. The middle years focus on competency diagnosis and practical experience accumulation. Guided by profile analysis, counselors encourage students to strategically engage in internships, skills training, and academic competitions. The senior year concentrates on the job search process itself, with counselors providing targeted support at critical junctures involving resume refinement, interview preparation, and offer evaluation.

At the dynamic follow-up level, the system automatically pushes guidance task reminders and lists of students requiring special attention to counselors based on the student's current academic phase. This enables counselors to proactively identify cohorts who may be lagging in career planning, exhibiting anomalous job search behavior, or facing significant employment difficulties, allowing for timely intervention. For example, Ma Songmei et al.[16] developed a "Counselor+" model that integrates employment guidance throughout the entire student development process, with differentiated objectives set for each academic year: career awareness and planning in the first year, competency enhancement and goal attainment in the second and third years, and job-seeking skills and employment outcomes in the fourth year. In this model, AI performs auxiliary functions such as data monitoring and task reminders, allowing counselors to concentrate their efforts on core activities like face-to-face consultations and the formulation of personalized guidance strategies.

#### **4.4. Competency Training: Systematic Development and Simulated Practice of Job-Seeking Skills**

Competency training is intended to provide counselors with standardized tools for skill development, thereby overcoming the traditional model's reliance on individual experience and its limited range of training scenarios.

In resume optimization, the system provides students with intelligent diagnostic feedback and revision suggestions. When a student uploads a resume, the system automatically parses its structure, extracts keywords, and identifies content gaps or suboptimal phrasing in relation to the requirements of a target position, generating a detailed optimization plan. The counselor intervenes after the initial AI review, auditing and supplementing the proposed changes with a particular focus on helping students identify and effectively articulate their unique personal strengths and achievements.

In interview preparation, the system creates immersive

virtual interview environments and provides a diverse bank of simulated interview questions spanning multiple industries and job functions. Students can select interview types and engage in repeated practice sessions. The system offers real-time feedback on verbal fluency, logical coherence, and response content. Counselors then review the system-generated training reports to pinpoint specific areas of weakness and conduct focused, one-on-one coaching sessions. This establishes a closed-loop support process of assessment, targeted practice, and feedback.

In skills development, the system recommends personalized learning resources and training programs based on competency gaps identified in the student's profile. Counselors use these recommendations, combined with their understanding of the student's developmental aspirations, to help students formulate feasible skill-enhancement plans. Furthermore, the system can dynamically adjust learning content and difficulty based on individual progress and mastery, delivering tailored career development support through a mechanism of differentiated instruction that carefully considers each student's academic background, career interests, and unique talents.

In summary, the "Precise Profiling - Intelligent Matching - Full-process Companionship - Competency Training" four-in-one employment guidance service model, with the counselor as the service principal and generative AI as the technical backbone, establishes a closed-loop service ecosystem that spans the entire lifecycle of student development and the full continuum of the job search process. The core value proposition of this model is twofold: first, AI's information processing capabilities alleviate the structural constraints imposed by counselors' limited bandwidth and information asymmetry; second, by offloading transactional burdens, the model empowers counselors to concentrate their efforts on the high-value, high-touch activities that require professional judgment and genuine empathy. Ultimately, this model facilitates a paradigm shift in employment guidance from an experience-driven, coarse-grained service to a data-driven, precision-oriented one.

## 5. Conclusion

Generative AI provides a core technological foundation for resolving the threefold predicament confronting university counselors in employment guidance. The four-in-one, human-machine collaborative employment guidance model proposed in this study facilitates a transition from experience-driven to data-driven methodologies and from coarse-grained service delivery to precision provision, thereby achieving an organic synthesis of technological empowerment and the essential humanistic purpose of education. This model offers a practical pathway for the construction of digital employment services in higher education and for enhancing the quality and efficacy of counselor-led career guidance, ultimately contributing to the goal of high-quality and full employment for university graduates. Future endeavors should focus on the continuous optimization of collaborative mechanisms and the strict adherence to ethical boundaries to further refine and enhance the employment guidance service system.

## References

- [1] Yang, Z. K. (2026). New requirements for employment in the 2026 government work report. *China Employment*, (04), 9-11.
- [2] Wang, Y. L., Tong, Y. Z., & Guo, X. P. (2025). Research on the digital transformation path of college counselors' employment guidance capability empowered by generative AI. *In Proceedings of the 2025 Symposium on College Counselor Team Construction* (pp. 343-346). Beijing: Peking University Press.
- [3] Zheng, Y. (2025). Research on the precise employment path of application-oriented undergraduate colleges empowered by generative AI. *Vocational and Technical Education*, 46(26), 71-75.
- [4] Tian, M., & Qiao, A. (2025). Research on improving the efficiency of employment guidance in private colleges with the "AI+" employment guidance model. *In Proceedings of the Symposium on Education-Driven Innovation and Sustainable Development of Construction Engineering and Corporate Culture* (pp. 77-79). Beijing: China Enterprise Culture Promotion Association.
- [5] Che, P. P. (2025). Research on role transformation and capability construction of college counselors in employment guidance driven by generative AI. *Talent Development*, (09), 45-47.
- [6] Mao, Q. H. (2025). Practical path of generative AI empowering college students' employment guidance. *Economist*, (10), 181-182.
- [7] Yao, M. B., Tang, S. Q., Peng, C. Y., et al. (2026). AI + big data boosts the two-way integration of education and market: Taking Wenzhou University as an example. *Chinese University Science & Technology*, (S1), 62-65.
- [8] Li, C. (2025). Research on the path and practical strategy of improving professional ability of college counselors in employment guidance under the background of AI empowerment. *In Proceedings of the 2025 Symposium on College Counselor Team Construction* (pp. 268-270). Beijing: Peking University Press.
- [9] Yin, D. Y., & Guo, Q. Y. (2025). Research on the practical path of generative AI empowering college students' employment guidance. *Henan Education (Higher Education)*, (01), 43-44.
- [10] Wei, J. P. (2026). Research on the innovation path of counselors' work under the background of generative AI. *Data of Culture and Education*, (01), 98-100, 104.
- [11] Gao, D. J., Li, Y. X., Zhang, R., et al. (2025). Analysis on the human-machine collaborative employment guidance mechanism in colleges and universities based on AIGC technology. *Modern Management*, 15(9), 36-40.
- [12] Chen, Y. (2026). Technical empowerment and value guidance: Dual path research on role transformation of college counselors in career guidance in the AI era. *Talent*, (03), 111-114.
- [13] Ma, R. (2026). Digital transformation of employment services in colleges and universities in the AI era to empower high-quality employment of college students. *Public Relations World*, (07), 106-108.
- [14] Zhu, L. Y. (2025). Research on the precise employment guidance model of college counselors under the background of big data. *Science & Education Tribune*, (21), 115-117.
- [15] Xin, F. J. (2025). Artificial intelligence empowering employment and entrepreneurship guidance: Construction of a personalized service model. *China Strategic Emerging Industries*, (21), 175-177.
- [16] Ma, S. M., & Yuan, X. (2020). A preliminary study on the "counselor +" employment and entrepreneurship guidance service model: Taking the Tourism and Culture College of Yunnan University as an example. *Theory and Practice of Innovation and Entrepreneurship*, 3(07), 126-128.