AI and Graduate Student Professional and Career Development

Generative Artificial Intelligence (GenAI) can support aspects of professional and career development for graduate students. This document discusses some common affordances of GenAI for graduate professional and career development and offers preliminary guidance for the responsible use of AI.

Uses of AI in Professional and Career Development

Career research. A cornerstone of professional and career development is helping students clarify their career interests early, and iteratively, and set goals for maximizing their future employability. GenAI can assist this process by helping students identify careers that match their values and interests and understand employer expectations. It can generate outreach messages to prospective contacts for informational interviews (Chamorro-Premuzic 2025).

Development planning. AI can assist in comparing employer expectations to a student's current CV or resume to identify areas for growth. AI can support generating a draft Individual Development Plan geared toward employment in a specific field, with suggestions for conferences to attend and publication venues to target (Elliott 2025; Chremos and Repetto 2025).

Application generation. AI can help generate and tailor materials for job applications (as well as internships and fellowships), including cover letters, CVs, and resumes. E.g., SciPhD's Flamingo is geared toward STEM PhDs. UVM subscribes to Jobscan.

Interview preparation. AI can help research prospective employer culture, anticipate likely interview questions, and roleplay interviewers, as students become more comfortable with the interview process and polish their presentations (Chamorrow-Premuzic 2024).

Guidance

Take ownership, verify accuracy. Students are accountable for the content of any materials generated with the aid of AI for submission to a third party, such as a prospective employer or funder. Students must ensure that the content, tone, and style of materials reflect their intentions. Students must verify the accuracy of AI outputs, including conducting checks of AI analysis and consulting additional resources (e.g., relevant literature, faculty advisor). (Chremos and Repetto 2025).

Protect your privacy. Users should remove personal information (e.g., name, contact information) from documents shared with AI tools and not share sensitive data or other confidential information with such tools (Ramezan 2025).

Focus on relationships. At the job application stage, AI can make it very easy to submit a high volume of digital applications. This approach has a low likelihood of success and contributes to the digital noise distorting the job market (Edwards 2025). Students should always combine their digital tools with the irreplaceable work of making human connections to optimize for a successful job search (Morris 2025).