ProMatch: Advancing Two-Way Proactive Recruitment with Process-Oriented Self-Regulatory Learning

In the competitive online recruitment landscape, job seekers and employers navigate a complex, interactive process involving self-regulation. We propose a novel method called ProMatch to address the challenges of person-job match in the two-way proactive online recruitment process. ProMatch incorporates profile features and historical sequential behaviors to learn bilateral representations, including static and self-regulatory components. These representations are then integrated to learn key milestones in the recruitment process, such as intentions, preferences, and matches. Additionally, ProMatch incorporates information dependency and partial relationship constraints between key milestones to further enhance learning effectiveness and mitigate class imbalance. We trained our model using real-world data from a leading online recruitment platform and conducted a comprehensive evaluation of ProMatch's performance through various offline experiments and a two-week field experiment. The results indicate that ProMatch significantly enhances recruitment efficiency, with a 9% increase in click-through rate and a 20% increase in interview-through rate.