

Enhancing Educator Support in MOOC Forums: A Multi-Task Model for Detecting Learning Confusion

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Abstract

Despite the popularity of MOOC, only a small percentage of course participants complete the course. Learners' confusion is one of the factors that impacts the overall learning process and ultimately leads to course attrition. However, extensive exchange of reviews often creates chaos, resulting in 'confusion' posts that can easily be ignored. To this end, we create a labeled dataset for post-type classification and use the public Stanford MOOCPosts dataset to detect learning confusion. We propose a hierarchical multi-task learning framework that combines post-type and confusion degree classification using fine-tuned BERT models and virtual adversarial training. Our model performs with an accuracy of 89