

北京邮电大学 本科毕业设计（论文）任务书

Project Specification Form

Part 1 – Supervisor

论文题目 Project Title	Design, implementation and evaluation of virtual pedagogical agents		
题目分类 Scope	Multimedia and Vision	Research	Software
主要内容 Project description	<p>Virtual pedagogical agents can be used to motivate online learners, to provide affective and mental support during self-studying, and to improve the overall online learning experience. The integration of pedagogical agents in virtual learning environments is highly desirable, but their exact impact is yet to be assessed. The aim of the project is to further the understanding of the effect that pedagogical agents have on the learning experience of students. You will examine how students perceive the role of pedagogical agents as learning companions during specific learning activities and the effect that their assistance has on their overall learning experience. The goal is to equip virtual pedagogical agents with the ability to interact with the student and to respond to the student's affective and mental states through appropriate expressive motions and motivational behaviours. The project entails to first evaluate some existing pedagogical agents using user experiments (e.g., Wizard-of-Oz type experiments) and questionnaires, paying particular attention to aspects such as appearance, expressivity, interpretability, transparency, trust and potential for bonding. You will then propose new designs to address your evaluation findings, implement (e.g., in Blender and Unity 3D), deploy and evaluate the new pedagogical agents.</p>		
关键词 Keywords	Online learning, virtual agents, motivational behaviour, Unity 3D, wizard-of-oz experiments, evaluation studies		
主要任务 Main tasks	<p>1 Research the use of virtual pedagogical agents to provide motivational support</p> <p>2 Evaluation of existing agents through user studies</p> <p>3 Design and implementation of new pedagogical agents</p> <p>4 Evaluation of the new agents</p>		
主要成果 Measurable outcomes	<p>1 Virtual pedagogical agents</p> <p>2 Methodology for evaluating the impact of virtual pedagogical agents on the learning experience</p> <p>3 Guidelines for the design of pedagogical agents</p>		