

CGuider: A Sociable Robotic Platform for Predicting Future Career for Undergraduates

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Abstract

In this research, our main objective was to direct students to choose their future careers based on their experiences, qualifications, and passion. The social robotic platform was created to interact with undergraduate students in the computer science field. The structure was designed as a table-top robot which gives a realistic experience of a typical interview. The robot was equipped with an eye tribe, a microphone, and a speaker which were used to maintain continuous engagement with the student, detect speech and give responses accordingly. Several eye behaviors of the robot was predefined and implemented through an Android mobile application. Eye behaviors would change according to the state of the user's attention, such as neutral, listening or speaking. DialogFlow API was used to build the conversational flows, which can be used to produce interactive and engaging voice-based conversations with the robot. Knowledge acquired through these interactive conversations such as student's experiences, knowledge-level, and skills will be then used in the prediction of suitable future career paths. In order to make predictions, we need to observe the specific patterns in individuals which lead to various kinds of career paths. Acquiring these historical data was accomplished through a questionnaire targeted at past students who are currently pursuing career paths both in academics and in the relevant industry. After analyzing the collected data, the DialogFlow API conversational flow was constructed and tested. We were able to successfully conclude that CGuider was successful in its attempt to guide undergraduates in proposing and advising to choose a suitable career path to become successful in life.

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