|  |  |
| --- | --- |
| **Group Project Report** | Group 18 |
| **Date of Submission** |  |
| **Expected Submission Date** |  |
| **Project Title** | AI – Resume |
| **Sponsoring Company (CS if local only)** | IBM |
| **Contact Person** | John McNamara |
| **Contact Email** | jon\_mcnam@uk.ibm.com |
| **Project Supervisor <or as above for local>** | Gail Hopkins |
| **Supervisor Email** | gail.hopkins@nottingham.ac.uk |
| **Group members names and emails** | |
| **Kanlin CHENG.** Email: [psykc4@nottingham.ac.uk](mailto:psykc4@nottingham.ac.uk) | |
| **Yi Luan.** Email: [psyyl8@nottingham.ac.uk](mailto:psyyl8@nottingham.ac.uk) | |
| **Aleksandra Kondracka**. Email: [psyak10@nottingham.ac.uk](mailto:psyak10@nottingham.ac.uk) | |
| **Thomas Cherry**. Email: [psytc5@nottingham.ac.uk](mailto:psytc5@nottingham.ac.uk) | |
| **James Steeper.** Email: [psyjs19@nottingham.ac.uk](mailto:psyjs19@nottingham.ac.uk) | |
| **Xiaofei Guo**. Email: [psyxg1@nottingham.ac.uk](mailto:psyxg1@nottingham.ac.uk) | |
| **Project Background Information** | |
| *<Fill in here the tender as you understood it. Changes to the initial specification and when and how they were introduced. If you have been following an agile methodology these changes may have occurred throughout the project as requested by the sponsor/supervisor>*  The original tender required us to create a service which would allow users to get an understanding of a CV from a job applicant without having to actually read the CV. This would be through the interaction with an avatar via text input as well as speech. This avatar was to be embedded within an electronic application and the speech dialog along with other elements would be built up using Watson dialog service on Watson Bluemix (now known as IBM Cloud). Our original understanding was it should be able to process any CV it was given and then be able to provide output based on the CV chosen. Other requirements were; that the avatar should have a selection of meaningful backgrounds to allow demonstration of personality, that the owner of the CV should be sent an email when their CV is read, and also that the system should be able to provide a personality profile using the Watson personality insights service.  Throughout the course of the project there were a few changes made to the requirements both due to agreements and conversations with our sponsor and also due to technical difficulties we faced. The first change was very early on as we had our first few meeting with our sponsor we talked more about the actual functionality and what he was expecting. He admitted that creating a system to analyse any CV given to it would take considerable more time than we had and agreed that, although admiring our enthusiasm, he was expecting a system to demo that this could be done. This meant he wanted us to base a mock system on one CV and make the system appear to be analyse the CV but instead we could pre-program the backend as to already have the information already in. We therefore requested information from our supervisor to create a CV that we could use for their information.  The requirements for the avatar also changed during the project as we got agreed that instead of a customisable avatar for the user to modify, that we should have a choice of perhaps 3 avatars. These 3 would have different styles; casual, smart and wacky and the applicants would choose which they wanted to represent their personality.  Later on in the project when working on the speech input and output, when encountered several issues and spent quite a lot of time trying to understand and learn about the service. When feedback to our sponsor about the issues we were having he explained that the speech input within the Bluemix service was not always reliable. Therefore, he suggested that we should aim to get the text-to-speech working as this was often more reliable, meaning our avatar would speak to the user but the user would have to reply with keyboard text input.  Therefore, the final requirements for the project ended up looking as such:   * Create 3 styles of avatar * Have a system which responds with answers about a single CV * Allow the user to interact with the avatar via text input * The avatar should respond with both text and audio output * Use Watson personality insights to provide a personality profile * Send the owner of the CV notification that their CV has been read   **(500 words maximum)** | |
| **Progress on Work at Time of End of Contract** | |
| *<Summarise here the extent to which you have achieved in your deliverable the objectives outlined above. Wherever objectives have not been achieved outline the extent to which you have not achieved the objectives and the reasons for it. Also give information on future plans for your project>*  We believe that we have been able to achieve most of the requirements within our deliverable. We have a website which has a chat window for the user to interact with our avatar/ system via text and speech input and output. Even though we were told that it would not be realistic to have speech to text used within out project, we still managed to integrate it and get it to work well with most types of microphones. Using this, users are able to find all details within our mock CV, therefore demonstrating how this would work when analysing any CVs. We have aimed to make this an easy process by using the option to write full responses or by using numbered lists when giving the users options, this allows for a quicker understanding of how to use the chat system.  As we are basing our application on demonstrating one CV, we have chosen an avatar to represent this person and therefore have not provided the ability to choose between avatars. However, we have created 2 different styles of avatar and two backgrounds that we could have picked. Showing that if we had allowed users to choose style in this application that they would have the choice between avatar styles. We feel that this as well as the choice of background would allow users to display personality.  Originally we had planned to design 3 interactive avatars for the user to choose from. However, due to the time constraint and encountering issues with the text to speech functionality our application contains 1 interactive avatar and another avatar which does not yet have animation applied. This would be something we would work on in the future if continuing the project.  We have managed to use the personality insights  **Future plans for the project**  If given more time with this project, we would have looked at making this AI resume work for all resumes that were uploaded. Since we were advised this would take a lot more time (more than a year) and a lot more work, it was not realistic for us to get or application to work with all types of resume. However, we would definitely be up for the challenge of making this in a way in which it is able to analyse any given resume.  Another thing that we would definitely do is have a choice of avatars for the user to pick from. Since we were only analysing one resume in this project, it was reasonable to have 1 avatar design representing that person with a selection of backgrounds. On the other hand, if we had the time we would have a selection of avatars, in which you can adjust certain features, such as: Eyes, mouth, body, nose & clothing. This feature would make the avatar representing the resume candidate more personal, since they would choose features that represent them.  If given more time with this project the first thing we would look at doing would be to incorporate speech-to-text in our application. This requirement was taken out due to the having errors and that our sponsor advised it may take additional time to get working properly and therefore it makes sense for this to be the first thing we would add.  **(1000 words maximum)** | |

|  |  |
| --- | --- |
| Documenta-tion of the project is here. | <https://drive.google.com/drive/folders/0B2xSQfk5N_cjTHZQQ0UzNW0zWUU?ths=true> |
| The code repository is here | <https://github.com/T-cherry/AI-Resume> |
| Other project manage-ment documents (e.g. Trello boards) are here. | <https://trello.com/b/v3jjfdoI/cs-group-project> |