Motivation Documents

Current Team Details：4 members

Team member：

NAN XIAO	18209984
YANLIN REN	18210182
QIANGANG ZHU	18210516
XUESONG ZHANG	15206193

NAN XIAO: His undergraduate degree is in software engineering and he is familiar with the process of software development. Additionally, some technology includes H5 web design, human-computer interaction, front-end technology and database development. The master's course is biased towards Data Science, and can use R language and Python proficiently, as well as data visualization. Meanwhile, have a certain degree of grasp on text analysis, time series, database design.

YANLIN REN: She’s undergraduate degree is Internet of Things. Focus on Radio frequency identification. Available programming languages are C#, C++, Java and python. Similar to NAN XIAO, the master's course is biased towards Data Science, machine learning and advance machine learning, data mining, data science with python, and some course based on Java: Distributed system, Recommender Systems. Information Visualisation can help to data analysing.

QIANGANG ZHU: He has been working on machine translation related projects during his undergraduate period. He is very interested in knowledge related to language processing and data analysis thus most of his courses in graduate degree are about this aspect: Machine learning, deep learning, data mining, Text analysis, speech signal processing, human language processing information theory, big data. Proficient in C++, Python and Java.

XUESONG ZHANG: The undergraduate major is software engineering. During the graduate period, the main research directions were cognitive science and artificial intelligence. Familiar with Java and C # development, and also have some understanding of python. The undergraduate graduation project is AR mobile application. Once participated in Unity game project, Java Web Service project, Android web application development, deep learning sound classification project. Willing to participate in any software design related work.

Covid 19 project: During quarantine, everyone is always concerned about the epidemic situation. Although the trend of the epidemic can be learned from some newspapers or social media, it often lacks the support of real data. We want to use data visualization and other technologies to create an application that could analyse epidemic data so that the public can really have a good understanding of something behind the data. In this project, machine learning and data visualization technologies are mainly used. Our group can match these requirements very well. Basically, all team members can use python for programming, and have previous experience in data analysis. Last semester, in the python assignment project, QIANGANG ZHU'S python assignment is an in-depth analysis of five NBA teams. NAN XIAO used historical data to create a model to predict the NBA most valuable players in 2020. YANLIN REN collected the weather in Beijing for the whole year and analysed the relationship between rainfall and air quality. These experiences give us enough confidence to complete this project, we also have team members who are very good at interaction design and can create a satisfactory dashborad application.

Top News project: News websites are widely used in daily life, and users' requirements for news freshness, relevance, and quality are constantly improving. Information retrieval technology related to news is very mature, and there are many successful experiences to learn from. Based on this background, we are very interested in developing a reliable and easy-to-use headline news selector. This project will be the intersection of multiple technical fields, including but not limited to web service development, front-end design, database design, text analysis, machine learning, cloud technology. In addition, learning and using Microsoft's Azure cloud computing service is also very interesting. Both academically and practically, this project is very meaningful.

According to the technical stack requirements provided by the documentation, we believe that the skills acquired by our team members can complete the development of this project. All team members have Java and python development experience. In terms of application development, XUESONG ZHANG once had Java Web Service development experience, and had experience using other cloud-based services. NAN XIAO and YANLIN REN can provide more help in machine learning. Also XUESONG has some knowledge background of deep learning. In addition, NAN XIAO is also proficient in web front-end design. QIANGANG ZHU has enough experience in text analysis. In summary, we believe that we have sufficient reasons to choose the Top News project.

Dyslexia-Friendly Assistant: There are some people in today's society who have dyslexia. They may have limited reading ability due to congenital diseases or have not experienced cultural education. Whenever we see this part of the people, their life and work are facing many difficulties and challenges. So we want Design a web application to solve the user's reading difficulties. Our team members have a lot of experience in natural language processing and speech processing. Especially QIANGANG ZHU has three years of experience in machine translation. In addition, other members have also chosen machine learning, deep learning, text analysis, Python and other courses. All of us think we need to do some project which is meaningful for human rather than only learn some skills.