

Developing an Intelligent Chatbot: the First Interim Report

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Abstract

This interim report presents (1) the outline of our coursework report, (2) some initial descriptions of the requirements of the coursework, the methods, programming languages, packages, tools that have been identified so far, and (3) an initial work plan.

1 Introduction

For this coursework we are developing a chatbot to help customers in finding the cheapest available ticket for their chosen journey also to improve customer service satisfaction by applying some appropriate AI techniques.

1.1 Background and Motivation

A bit background information on chatbot in general and the coursework specification(Wang 2018).

1.2 Aim and Objectives of this coursework

You may rephrase the the aim and objectives from your point of view.

1.3 Difficulties and Risks

List as many as you can identify.

1.4 Work Plan

2 Related Work

Review some similar chatbot systems. (Write as much as you have now.)

3 Methods, Tools and Frameworks

In this section, you should describe the methods, programming languages, packages, tools and framework you plan to use. for this report, you can list some you have identified and intend to use. No need to give any details.

3.1 Methods

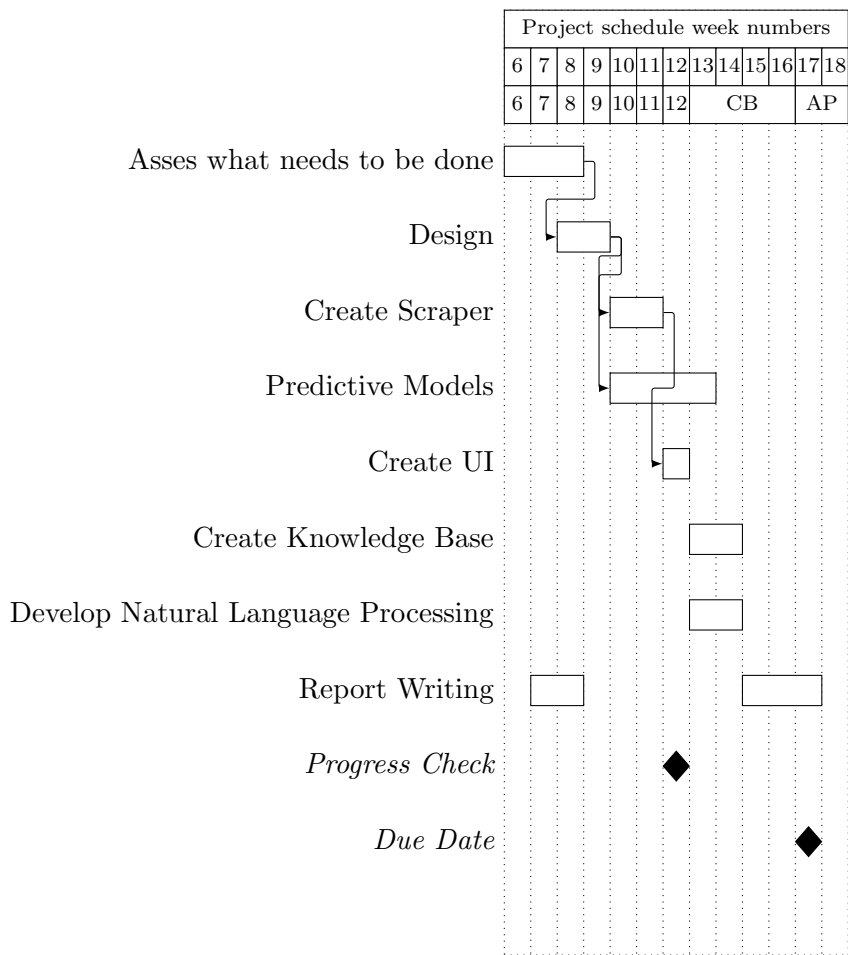
You may list some methods you will use for developing your chatbot, including

- Such as what type of user interface (graphical, text, or voice, etc) you intend to use.

- What Natural Language Processing and understanding methods you intend use,

- What referring or reasoning methods

- What prediction methods, such as kNN, neural networks etc.



Project Gantt chart

3.2 Languages, Packages, Tools

On programming language: using Python or Java, or others.

Packages: for NLP, use NLTK(Bird & Klein 2009), or others,

For KnowledgeBase and Engine: PyKE or PyKnow, or others.

For Database: e.g, Postgres, or MongoDB

3.3 Development Framework

4 Design of the Chatbot

4.1 The Architecture of the chatbot

You may draw a functional diagram if you like.

You can describe your design for each key module or component of your chatbot, in a subsection. E.g.

4.2 User Interface

4.3 NLP

4.4 Knowledgebase

4.5 Inferring Engine

4.6 Delay Prediction Models

4.7 Conversation Control

5 Implementation

6 Testing

6.1 Unit Testing

6.2 Integration Testing

6.3 System Testing

6.4 Userbility Testing

7 Evaluation and Discussion

8 Conclusion or Summary

References

Bird, Steven, E. L. & Klein, E. (2009), *Natural Language Processing with Python*.

Wang, W. (2018), ‘Artificial intelligence modules (cmp6040, 7028) coursework specification’.