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Background Description [↗](#)

The project embarks on creating an innovative Q&A platform utilizing the capabilities of a Furhat robot. This initiative is driven by the need for a specialized and interactive information resource that leverages the vast data available on websites like Melbourne Connect or CIS. The core idea is to harness the power of web scraping and advanced language processing to build a robot that acts not just as a source of information but as a dynamic and intelligent receptionist.

Project Overview [↗](#)

The project encompasses several key phases, starting with data collection and preparation through web scraping. This initial stage aims to build a solid foundation of knowledge for the Q&A agent. Following this, the development of a domain-specific Language Model (LLM) will take place, which is essential for equipping the Furhat robot with the ability to generate relevant and accurate responses. The subsequent integration of this agent with the Furhat robot marks a significant milestone, culminating in a platform where users can interact and receive information through a conversational interface. Additionally, the project will enhance the platform with receptionist functionalities, making it a versatile tool for users.

Project Role [↗](#)

Product Manager - Zhuowen Zheng

Scrum Master - Xi Luo

Architecture Lead - Shaohui Wang

Quality assurance lead - Chengjia Zhou

Development Environment Lead - Jiyuan Chen

Deployment Lead - Peng Tang

Client Goals [↗](#)

The client aims to develop a domain-specific Q&A system that embodies the integration of cutting-edge language models with robotic technology. The goal is to produce a Furhat robot capable of serving as an interactive and intelligent receptionist, providing information and assistance with a high degree of accuracy and user engagement. This system should be able to address queries, offer assistance, and perform receptionist duties effectively, enhancing the user experience through technology.

Motivation [↗](#)

The motivation behind this project is to push the boundaries of what is possible in the realm of AI and robotics, creating a system that can interact with humans in a seamless and natural manner. By focusing on a domain-specific model, the project seeks to demonstrate how

targeted information can be delivered more effectively, offering a personalized experience to users and showcasing the potential of integrating AI with human-like robots.

Goals

The goals of this project are to successfully scrape and utilize data from a chosen website, develop a domain-specific LLM, and integrate this into the Furhat robot, resulting in a sophisticated Q&A and receptionist platform. This endeavor is not just about building a technical system but also about enhancing user interaction and information accessibility through the innovative use of AI and robotics.

Scopes

1. **Data Collection and Preparation:** This phase involves the systematic web scraping of targeted websites, such as Melbourne Connect or CIS, to gather a comprehensive dataset. The data collected will serve as the foundational knowledge base for the Q&A agent, ensuring it has access to relevant and up-to-date information.
2. **Development of a Domain-Specific Language Model (LLM):** The project will focus on creating a specialized LLM tailored to the needs and context of the Q&A system. This model will be designed to understand and process queries in a specific domain, enabling it to generate accurate and contextually relevant responses.
3. **Integration with Furhat Robot:** A critical phase of the project is the integration of the developed LLM with the Furhat robot. This step will transform the robot into an interactive and intelligent receptionist, capable of engaging with users through natural language conversations. The integration process will involve both software and hardware components to ensure seamless interaction.
4. **Implementation of Receptionist Functionalities:** Beyond answering queries, the project aims to equip the Furhat robot with receptionist duties. This includes capabilities such as greeting visitors, providing directions, scheduling appointments, and other tasks that enhance the user experience and operational efficiency.
5. **Testing and Quality Assurance:** Throughout the project, rigorous testing and quality assurance measures will be implemented. This includes unit testing, integration testing, and user acceptance testing to ensure the system's reliability, accuracy, and user-friendliness.
6. **Deployment:** The final scope of the project involves deploying the system in furhat robot. This phase ensures that the system is fully operational and that users are comfortable interacting with the Furhat robot.

Personas

1. **Persona: Dr. Alice Martin**
 - **Role:** University Researcher
 - **Age:** 35
 - **Goals:** Seeks to quickly find specific academic information and research opportunities available at Melbourne Connect.
 - **Motivations:** Efficiency in accessing accurate and up-to-date research data and collaboration opportunities.
 - **Challenges:** Navigating vast amounts of data to find relevant information.
 - **Interaction with Furhat:** Uses the Q&A platform to get immediate, accurate answers to her queries about ongoing research projects and collaboration opportunities.
2. **Persona: Mike Chen**
 - **Role:** Prospective Student
 - **Age:** 20
 - **Goals:** Wants to know about the courses of CIS, and the life of CIS.
 - **Motivations:** Finding a suitable university that offers the courses he's interested in and understanding the CIS culture.
 - **Challenges:** Sifting through multiple sources to get a comprehensive view of what the university offers.
 - **Interaction with Furhat:** Engages with the robot to gather detailed information about the university, helping him make an informed decision about his application.
3. **Persona: Sarah Thompson**
 - **Role:** Visitor
 - **Age:** 45

- **Goals:** Needs to navigate the university campus and find specific departments or facilities during her visit.
- **Motivations:** To have a hassle-free visit without getting lost or missing important meetings.
- **Challenges:** Unfamiliarity with the campus layout and location of different departments.
- **Interaction with Furhat:** Uses the Furhat robot as a virtual receptionist to get directions, information about the campus, and schedule her appointments efficiently.