



University of
New Haven

New Haven Admissions Robot (NHAR)

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Introduction

An Open House event is a keystone of a university's recruitment plan (Fischbach, 2006). Although, planning an Open House that ensures every prospective family feels engaged is a challenge. To address this problem, we propose our New Haven Admissions Robot (NHAR), a smart virtual assistant robot that provides continuous and instant support to students and their families. Support includes accurate information about the university, the offered programs, the history, the campus, and the student life.

Objectives

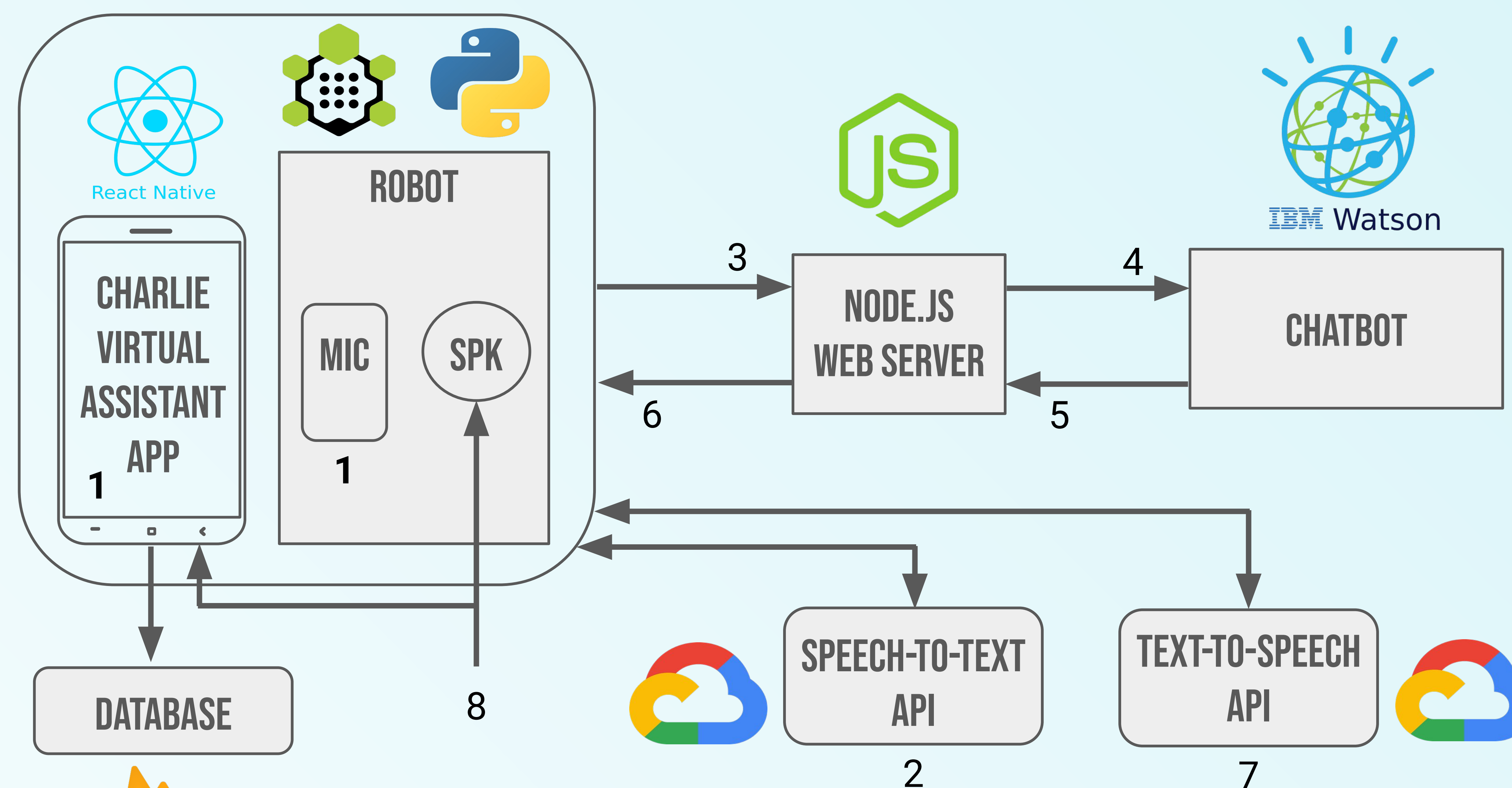
- ❑ Build an interactive robot to engage with visitors.
- ❑ Create an easy-to-use interface for speaking to Charlie the robot and receiving answers.
- ❑ Design a virtual assistant mobile application for admissions staff and remote mobile users.

Acknowledgements

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Architecture and Design



Project Outcomes



User Experience

Provide a complete front-to-back user experience for engaging with the Charlie Assistant.



Voice Interaction

Ensure users are able to send voice intents and receive feedback regarding the university.



Virtual Assistant

Provide a mobile-version of Charlie the Robot in order to answer university intents for remote users.



IBM Watson Chatbot

Supply an interactive user experience providing valuable and accurate information.



Charlie the Robot

Workflow Process

Our interactive process begins by either speaking directly to Charlie the robot (using an attached microphone) or our virtual assistant mobile application (1). This records an audio file that is sent to a Google Cloud API to be converted from speech to text and returned to the original device (2). The text, referred to as an intent, is sent to our Node.js web server (3) which communicates with the IBM Watson chatbot (4). The chatbot receives the intent text as input and provides a proper text response as output. The output is then returned to the web server (5), once again, where it is sent back to the original device (6). From the device, the text response is then sent to another Google Cloud API where it is converted from text to speech, where an audio file is returned (7). Finally, the audio file is immediately played back from either the speaker connected to the robot or the mobile device itself (8). This process creates a convenient experience for our users with an intuitive interface capable of answering a multitude of university questions.

References

Fischbach, R. (2006). Assessing the impact of university open house activities. *College Student Journal*, 40(1), 227+.