# Tempo

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**Software Engineering course project**

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## Preface

This is a proposal for a chat-based calendar AI app called Tempo that can be implemented using OpenAI's ChatGPT API. This project is for partial fulfillment of the requirements of a Software Engineering course (CSC431) project in the department of Computer Science at the University of Miami.

This proposal provides the scope and context of the project to be undertaken. It details the intended user group and the value that the system will have to them.

The intended audience of this document is the course professor and teaching assistants so that they can determine whether the project should be approved as proposed, approved with modifications, or not approved.

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# 1. Overview

## *1.1 Purpose, Scope and Objectives*

- The purpose is to provide users with an AI formulated calendar/planner where users can interact with the AI in a chat to create and chat about a schedule that works best for them. Groups looking to improve their time management—students, business professionals, education and workers—are the primary target audience.
    - The objective is to create an interface to manipulate events/tasks in natural language without having to manually add them or retrieve information about them.
    - Furthermore, Tempo aims to develop intuition for scheduling tasks based on a user's particular experience with the product.
    - The tasks required to perform the app's stated objectives are natural language understanding, maintaining simple calendar logic, and reading and retrieving data from various platforms.
    - The app will require minimum hardware that will be outsourced to a cloud provider, where the AI component and any computation will take place.
    - (Which apps are to be integrated are to be decided throughout the course of the project): Cross platform integration with other SaaS products like Google Maps, Square Up, Uber, Slack, and other popular calendar apps like Apple and Google calendar are potential targets.

## *1.2 Project description*

- The app will follow a simple layout with the front-end being made in Flutter with Dart, and the body of the app will be a calendar implemented with JavaScript open-source libraries such as FullCalendar. The AI chat feature will be enabled by OpenAI's Chat GPT API's Text-DaVinci-003 model. Computing and storing user data performed by Tempo will be hosted on AWS, eliminating the need for private, dedicated hardware. To address the challenge of cross-platform integration with services like Google Maps, Uber, and Slack, we will adopt a framework like Apache Camel. The users will be able to use the text chat feature to make specific requests such as: "What is the best time and date idea for Alice and me?", and get it directly scheduled in their calendar upon user approval. They will then be able to integrate their calendars on Tempo with other popular calendars like Google and Apple's calendars. The specific types of user interactions will be determined and expanded on through the course of the project. Tempo will be written in JavaScript, Dart, and Python. We will consider the AWS Documentation to make Tempo cloud deployable to accommodate multiple users' accounts.