From Students…
…to Professionals

Project Plan Presentation
Digital Assistant

The Capstone Experience

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Functional Specifications

• Solves the problem of employees having to manually check the databases.
• Our project’s purpose is to create a digital assistant that is able to respond to user’s input.
• Divide project contents by user's positions or identify which part of the project is responsible to the user’s position.
Design Specifications

• Answers a wide range of topics
  ▪ Project status
  ▪ Issues/incidents
  ▪ Business applications
  ▪ Process contacts

• A web application that allows access to multiple platforms/devices

• Requires users to login with Stellantis username and password

• Supports both the Text Input and Speech Input
  ▪ Text Input: allows users to type through a keyboard
  ▪ Speech Input: allows users to speak through a mic

• Log unanswerable questions to determine future enhancements
Screen Mockup: Conversation - Schedule

Interactive Digital Assistant

- Your first meeting is MSU Capstone Meeting
- Your first meeting is at 10:20 AM
- Your first meeting is at Michigan State University
- Your first meeting's organizer is Dr.D

Type here or click on the mic
Screen Mockup: Conversation - Project

Interactive Digital Assistant

The status of IDA is On Task

The IDA project is expected to be completed by 02/28/2022

The next milestone of the IDA project is Alpha Presentation

The risk of the IDA project is "Deployment of the digital assistant to various platforms/devices”
Screen Mockup: Conversation - Incident

The priority of INC001 is 3 - Low

The configuration item of INC001 is AMPS Assembly-N-P

The short description of INC999 says AMPS running slow

The caller ID of INC999 is CARLOTA ZURLINDEN

what is the priority of incident 001?
what is the configuration item?
what is the short description of incident 999?
what is the caller id?
Screen Mockup: Conversation – Incomprehensible Questions/Commands
Technical Specifications

• AWS Cloud Platform
• Python
• Node.js
• HTML / CSS / JavaScript / PHP
• PhpStorm
• Visual Studio
System Architecture
System Components

• Cloud Platform
  ▪ AWS Lex (Digital Assistant)
  ▪ AWS S3 (Database)
  ▪ AWS Lambda (AWS Lex Functions)
  ▪ AWS Cognito (Login security)
  ▪ AWS Athena (Implement SQL into Lambda)
  ▪ AWS Connect (Logic visualization)

• Application
  ▪ PHP Storm (Front-end UI)
  ▪ Visual Studio Code (Back-end connect)

• Additional packet used:
  ▪ IBM_DB (Testing)
Risks

- Personalization of the assistant through user login
  - Personalized assistant for the user by logging into corporate user directory
  - Leverage access control to retrieve the appropriate data
- Secure connection to internal databases
  - Amazon Lex will securely connect to access information from databases
  - Access to a large csv file which contains relatively the same data as Stellantis’ database
- Deployment of the digital assistant to various platforms/devices
  - Ability to use IDA on various platforms/devices (iOS, Windows, etc.)
  - Deploying as web application designed for desktop and mobile
- Different positions have correctly access to different data
  - Verify authorization for access to team drives and other information
  - Project sponsor will confirm which data will be allowed for utilizing in project