BitBuilders

Problem Statement

Making career choices and AI based counselling accessible to every child at secondary level along with aptitude tests and detailed career paths.

Description

The project team shall establish an interactive AI based model that will help students to choose from careers. The model should handhold student in assessing his capabilities and subsequently help him in deciding a career path.

Problem Statement Title: AI-Powered Career Guidance for Secondary School Students

Theme: Smart Education
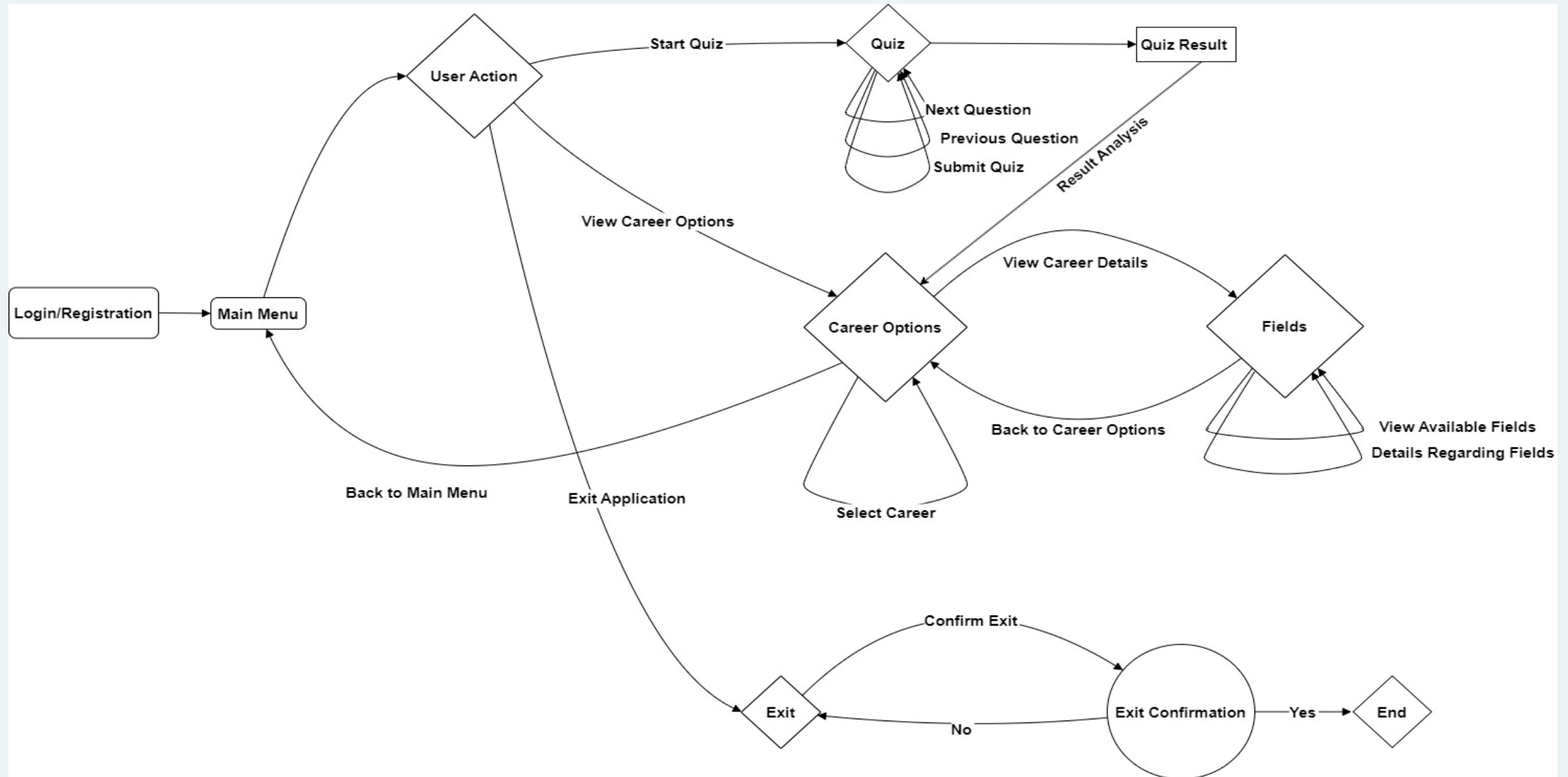
Organization: Ministry of Education

Category: Software

Problem Statement Code: SIH1434

Team Leader Name: Harshitha Tadishetty

Institute Code (AISHE): U-0747

Institution Name: Chandigarh University

Approach Methodology

Methodology

1. Web Application Overview : A web application that utilizes an AI model to assess test results and suggest career options for secondary-level students. Where Users receive a detailed report based on the questionnaire results. The AI model assists users in choosing a career path and provides various options, along with detailed career information.

2. Technology Stack :
* Frontend built with React, while Node.js serves as the runtime environment.
* Integration of registration, questionnaire, and career portal functionalities.
* MongoDB database for storing both user and website data.
* Utilizes a RESTful API to fetch and dynamically update data from the database.

3. Machine Learning Model :
* The ML model is trained on a dataset comprising more than 15 fields.
* The level of questions will increase based on the user's capabilities.
* User data is collected, analyzed, and detailed feedback, along with career advice, is provided.
* User performance is evaluated based on the difficulty of the questions they successfully   answer.
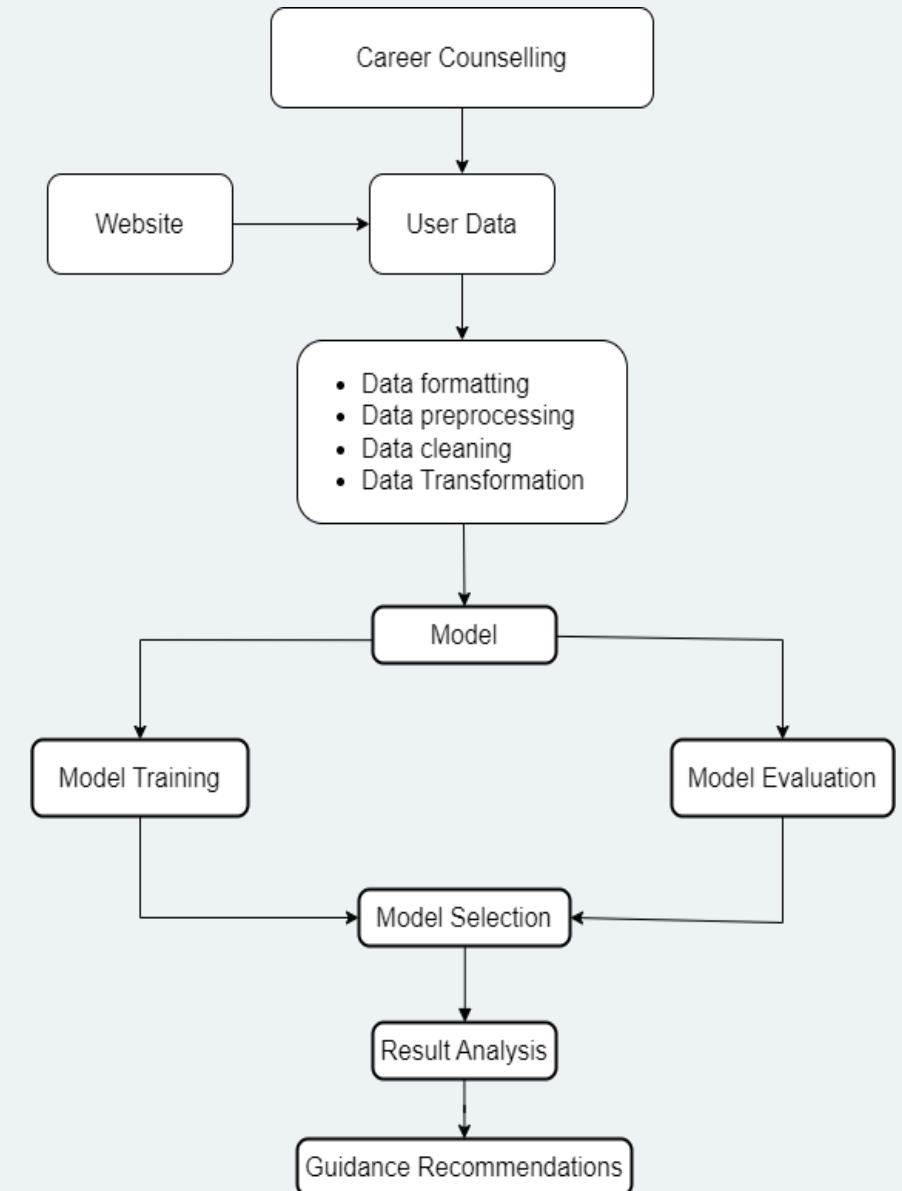* Model accuracy is assessed thoroughly before its selection.

Technology Stack:
Frontend: Mern Stack
Backend: NodeJS, MongoDB, Express
AI/ ML: NumPy, Pandas, TensorFlow, Sklearn
Database: MongoDB

Team Member Details

Team Leader Name: **Harshitha Tadishetty**

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Team Member 1 Name: **Arnav Vikas Gupta**

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Team Member 2 Name: **Anmol Malik**

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Team Member 5 Name: **Ayush**

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Team Mentor 1 Name: **Savita**

Category: Academic   Expertise: ML   Domain Experience: 6.5 years