Shilpa AI – Career Guidance & Learning Assistant

Project Report – Team Version

Project Summary

Shilpa AI is an AI-powered web application designed to guide OL/AL students in choosing the right career path based on their academic stream, interests, personality traits, and skills. It also provides access to relevant study resources, audio-based lessons, and connects students with mentors (free or paid) for personalized guidance. Built with Azure AI services and modern web technologies, the system is especially tailored for students in underserved areas.

Project Objectives

- Help students make better career decisions through AI recommendations
- Provide accessible learning via voice/audio features
- Connect students with mentors and educators
- Build an inclusive, scalable education platform

Team Members & Roles

Name	Role	Responsibilities
M 1	UI/UX & Frontend Lead	Builds student interface, forms, pages, voice features
M2	ML and DB	Builds and deploys the Azure ML model for career prediction
M3	Backend Developer	Connects frontend to ML model, builds Flask API,

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Tech Stack

Layer	Tools/Services
AI/ML	Azure Machine Learning, Azure OpenAI (optional)
Voice	Azure Cognitive Services – Speech-to-Text, Text-to-Speech
Backend	Python Flask
Frontend	React.js / HTML, CSS, JS
Database	Azure Cosmos DB / Azure SQL
Hosting	Azure App Service, Azure Blob Storage

System Workflow

1. **Student submits profile** (subjects, interests, skills, personality)
2. **Flask backend** sends data to **Azure ML model**
3. **Model returns** best-fit career options
4. **Frontend displays** career suggestions with voice support
5. Student can:
    - Access study materials
    - Listen to lessons
    - Connect with a mentor (free/paid)

Core Features

- AI-based career path recommendation
- Student input form (stream, interests, grades, personality)
- Voice input/output for accessibility
- Subject-wise learning materials and audio lessons
- Mentor matching and session booking
- Sinhala/Tamil/English support Optional

Project Timeline

Week	Tasks
Week 1	Planning, UI design, dataset prep
Week 2/3/4	Model training (Azure ML), frontend and backend setup
Aug Week 1	Connect all layers, add speech services, start database
Week 2/3	Testing, polish, deploy, create demo & report

To-Do List

- [ ] Build dataset and train model
- [ ] Design frontend pages
- [ ] Build Flask backend
- [ ] Set up Azure services (ML, Speech, DB)
- [ ] Connect all components
- [ ] Test and deploy
- [ ] Prepare final demo and presentation

Azure Services Used

Azure Machine Learning

Azure Cognitive Services: Speech

Azure App Service

Azure Cosmos DB

Azure Blob Storage

Azure Translator (Optional)

Azure OpenAI (Optional for chat/smart answers)
