



# Project Proposal



2023/2024

Graduation Project



# Meet Our Team

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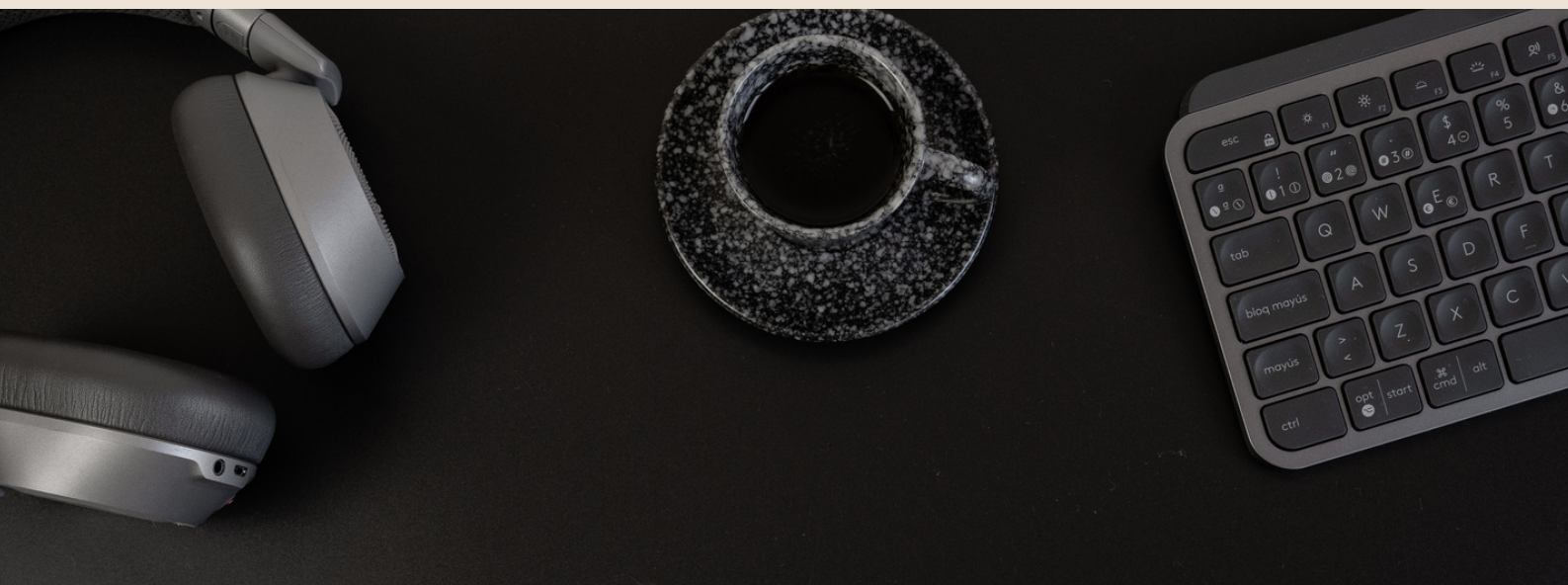
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# Overview

The objective of this project is to create a comprehensive and user-friendly application that facilitates the learning of the Chinese language. The application will incorporate a range of features designed to enhance the learning experience, making it accessible and engaging for learners of all levels.

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# Scope

Project Scope:

## 1. Language Learning Modules:

- We will design a structured curriculum, covering essential aspects of the Chinese language including vocabulary, grammar, pronunciation, and cultural nuances.
- Interactive lessons, quizzes, and exercises will be integrated to reinforce learning.

## 2. User Authentication and Profiles:

- Users will have the ability to create personal accounts to track their progress and customize their learning journey.

## 3. Speech Recognition and Pronunciation Practice:

- Integration of a speech recognition system to help users practice and improve their pronunciation skills.


## 4. Flashcards and Gamified Learning:

- A flashcard system will be implemented for vocabulary acquisition, along with gamification elements to enhance engagement.

## 5. Social Learning Community:

- A forum or chat feature will allow users to interact, exchange learning tips, and practice language skills with fellow learners.

## 6. Progress Tracking and Analytics:

- Implement a tracking system to monitor individual progress, providing personalized recommendations for improvement.
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# Tools

## 1. **Cross-Platform Development:**

- React Native: To develop for both Android and iOS with a single codebase.

## 2. **Backend Development:**

- Node.js: For server-side development.
- Express.js: building APIs with Node.js.
- MongoDB or PostgreSQL: Databases to store user profiles, progress, and content.

## 3. **Frontend Development:**

- React: For building the web interface.

## 4. **User Authentication:**

- Firebase Authentication: Ready-to-use authentication services.

## 5. **Real-time Communication:**

- Socket.io: Integrate live chat or real-time language practice.

## 6. **Speech Recognition:**

- Google Cloud Speech-to-Text or Microsoft Azure Speech SDK: For speech recognition.

## 7. **Audio/Video Integration:**

- WebRTC: For audio/video calling to incorporate live sessions.





# Tools

## 8. **Push Notifications:**

- Firebase Cloud Messaging (FCM): for timely updates and reminders.

## 9. **UI/UX Design:**

- Figma or Sketch: For designing the user interface and user experience.

## 10. **Database Management:**

- MongoDB Atlas or Amazon RDS: For cloud-based database management.

## 11. **Cloud Services:**

- Amazon Web Services (AWS): for cloud-based services and hosting.

## 12. **Version Control:**

- Git and GitHub: For collaborative development and version control.

## 13. **API Integration:**

- RESTful APIs for connecting to external services or databases.

## 14. **Testing:**

- Jest or Enzyme for unit testing (React).

## 15. **Deployment and Continuous Integration:**

- Jenkins: for automating the deployment process.



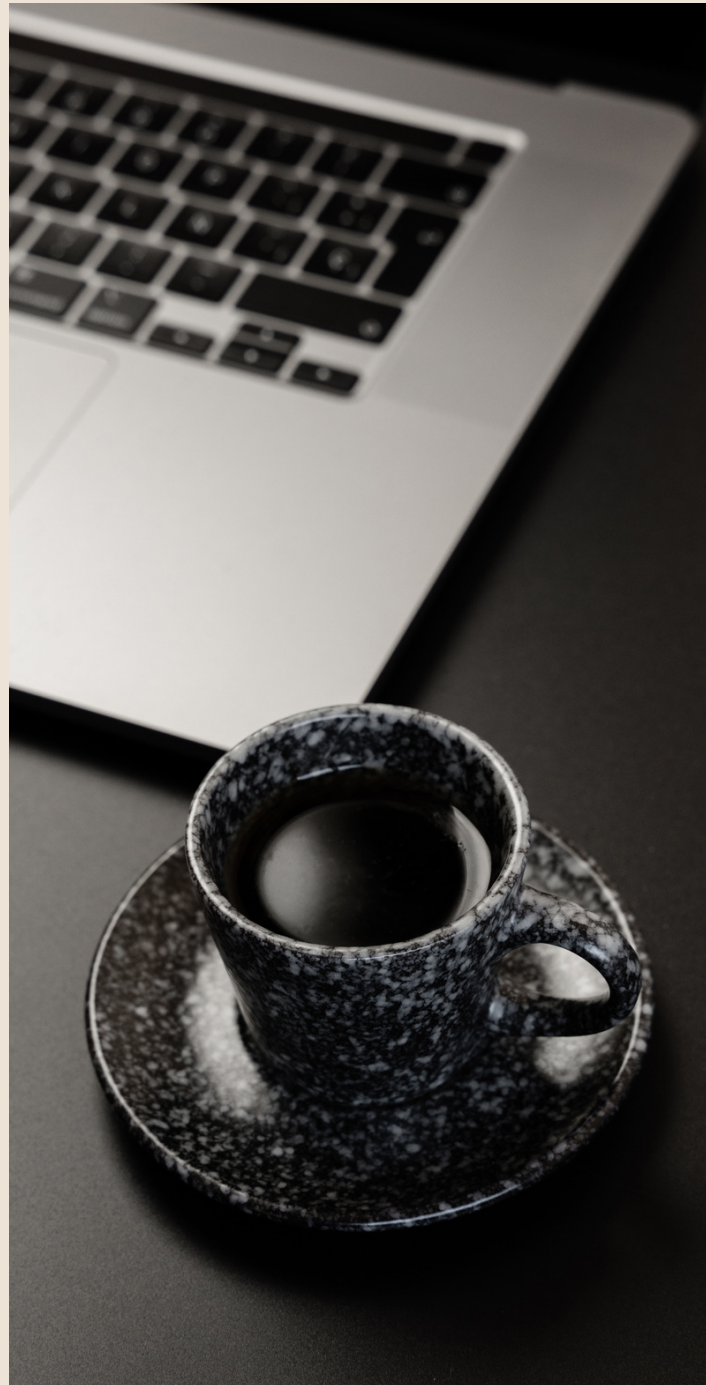
# Timeline

## Timeline:

- October [2023]: Project Kick-off and Planning, Requirements, User Stories
- November [2023]: System Design and Architecture, Business Plan
- December [2023]: Development and Coding Phase
- January [2024]: Development and Coding Phase
- February [2024]: Development and coding phase
- March [2024]: Testing and Debugging
- April [2024]: Finalizing and Documentation
- May [2024]: Presenting

## • Resources Needed:

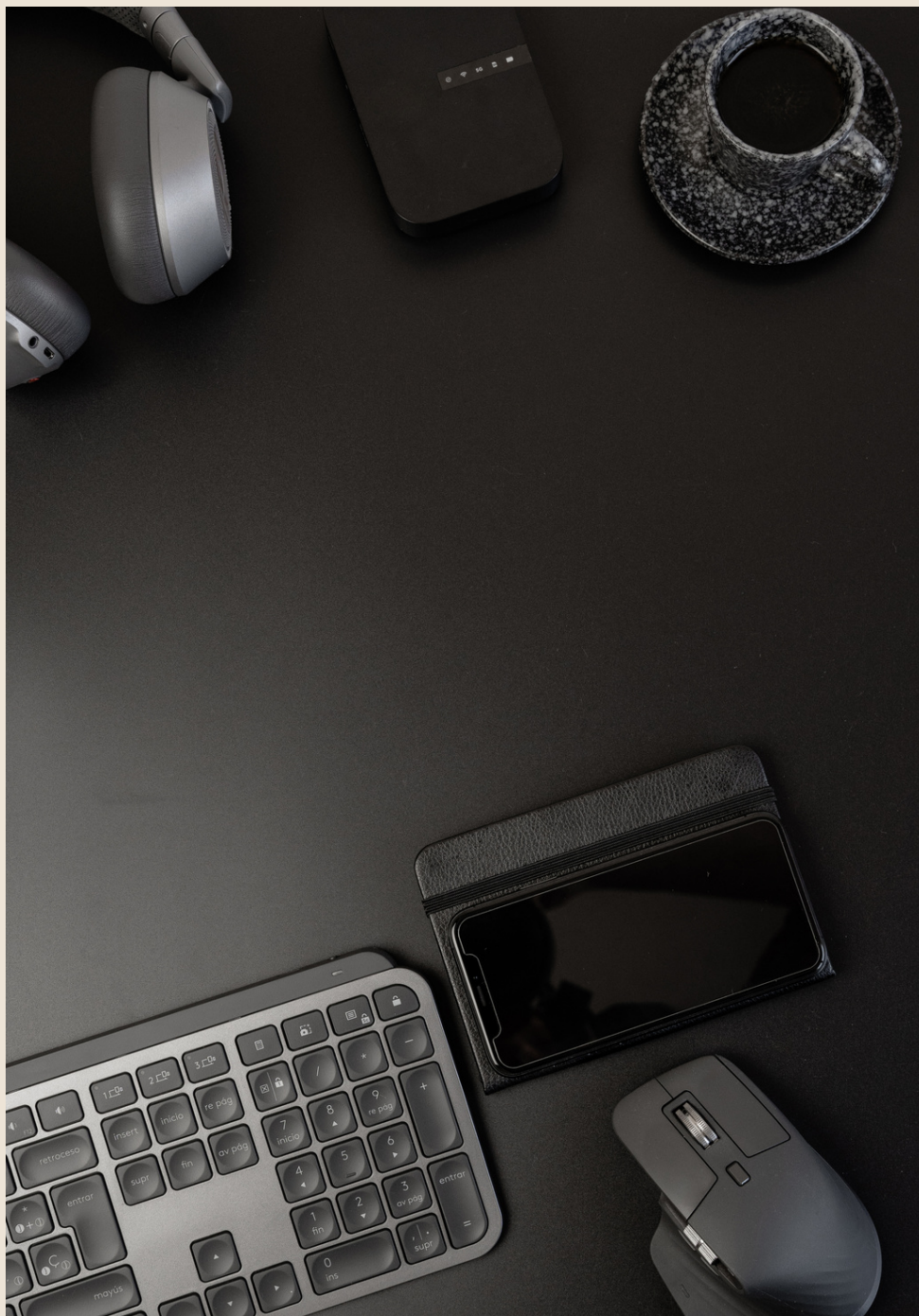
- Regular access to language learning experts for content validation
- Access to relevant APIs and language learning resources



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# Thank You



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