

Round 1: Idea Submission

# Team Name: Dugongs

**Team Leader:** Rose Pryia Pius

# Problem Statement: Lack of inclusive educational platforms leaves students with special needs without tailored learning tools or support, creating gaps in their development.

**Track:** Artificial Intelligence in Action

# Problem identified:

Many educational platforms fail to offer inclusive, personalized learning for students with special needs, such as Dyslexia, ADHD, or Autism. Traditional systems use a one-size-fits-all approach, leaving these students without the tailored support they need. Communication gaps further hinder students with behavioural or language impairments. Additionally, educators and caregivers lack cohesive tools to track progress and collaborate effectively. This creates an educational divide, limiting students’ ability to reach their full potential. A solution is needed to bridge these gaps and provide equal learning opportunities for all students.

# Market Research:

# EdVance is an inclusive educational platform designed to support students with special needs, such as Dyslexia, Autism, ADHD, and other cognitive challenges. Its customers are educational institutions, educators, and administrators seeking tools to improve outcomes for students with diverse learning needs. End-users include students, teachers, and parents, all benefiting from personalized learning experiences, assistive tools, progress tracking, and enhanced communication.

# Existing solutions like Ghotit, Proloquo2Go, and Khan Academy offer some support but lack integration, personalization, and communication between stakeholders. EdVance stands out by providing an all-in-one platform that combines personalized dashboards, emotion detection, assistive tools, and real-time progress tracking, fostering collaboration among students, teachers, and parents. This comprehensive approach ensures every student has the resources to succeed and bridges gaps in

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# accessibility and communication. EdVance’s impact will set a new standard in inclusive education, improving learning for special needs students and empowering educators and parents.

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# Project Name: EdVance

# Describe your solution:

EdVance is an inclusive educational platform that empowers students with special needs through personalized learning, assistive tools, emotion detection, and seamless communication among students, teachers, and parents. It integrates real-time progress tracking, adaptive learning modules, and support for diverse learning styles to ensure tailored, engaging, and effective education. Key features include:

1. **Personalized Learning Dashboards**: Customizes content to each student’s needs, adapting to their pace and style.
2. **Adaptive Learning Modules**: Real-time adjustments to lessons based on student progress.
3. **Assistive Tools (TTS and STT)**: Supports reading and communication for students with disabilities.
4. **Progress Tracking**: Monitors progress for students, teachers, and parents, celebrating milestones and identifying improvements.
5. **Seamless Communication**: Enhances collaboration through integrated messaging and feedback.
6. **Goal Setting and Feedback**: Facilitates personalized goals and actionable feedback for continuous growth.
7. **Inclusive Support for Multiple Disabilities**: Makes education accessible for students with diverse learning needs.

EdVance transforms learning by bridging gaps in accessibility and communication, offering personalized support that helps students with special needs engage fully and thrive academically and personally.

# Technology Stack:

# Frontend- HTML, CSS, ReactJS

# Backend- NodeJS, Python (Flask)

Database- MongoDB

# Innovativeness:

EdVance’s innovation lies in its all-in-one, inclusive approach that combines personalized learning, adaptive modules, and assistive tools like Text-to-Speech (TTS) and Speech-to-Text (STT) to support students with special needs. Its unique features include real-time emotion detection to gauge student engagement, seamless communication between students, teachers, and parents, and personalized progress tracking. These elements foster continuous collaboration, real-time adjustments, and tailored learning, making EdVance a groundbreaking solution that empowers students with special needs to thrive in an accessible and supportive learning environment.

# Show Stoppers:

1. **Data Privacy and Security**: Ensuring compliance with regulations like GDPR while protecting sensitive student data.
2. **Adoption Resistance**: Overcoming reluctance from educators and institutions to adopt new technology.
3. **Funding and Resources**: Securing ongoing funding for growth and development.
4. **Technological Barriers**: Ensuring accessibility for students in areas with limited tech infrastructure.

**Prototype:**

(You can add pictures of the prototype/wireframes/UI or provide a video link in which prototype is explained) (This section has maximum weightage)

<https://drive.google.com/drive/folders/1UNak1Rs_OsM1Sk9sl7kI5z0QG1ZQ5MhO?usp=drive_link>  
this link has videos and the canva link of our prototype design.

# Use Case Diagram/Flow Diagram: