

# AI Tutor Brochure

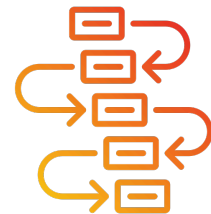
# Solution Overview

AI Tutor Solution provides an interactive learning experience to the student. Unlike any other Tutor, this solution focuses on the steps taken to solve the problem rather than the results. It consists of a validation engine that validates each step taken by the student to solve the problem, where ever a wrong step was submitted, a hint would be generated for the student. If we want to integrate multiple LLMs like GPT, Gemini, Claude, etc within this solution, we can do that.

## Key Features

### Process-Oriented Learning

Each step is validated in real time, and the Validation engine ensures accuracy while providing instant feedback. It fosters mastery of key concepts and building problem-solving skills.



### Validation Engine

It uses SymPy, a powerful library, to validate the correctness of the step. This allows students to stay on track, correct mistakes instantly, and confidently navigate complex problems with precision and clarity.



### Hint Generation

AI Tutor uses an advanced Large Language Model (LLM) to provide conceptual hints. When a student makes an error, the Tutor analyses the problem, the last correct step, and the incorrect step to generate a targeted hint.



### Problem Bank Management

Problem Bank is a repository that contains a variety of problems for students to solve, including different question types and complexity levels. It has three progressive difficulty levels (A: Basic, B: Intermediate, C: Advanced).



## Data Privacy

AI Tutor ensures data privacy and security by ensuring that no personal information is shared with or processed by the integrated Large Language Models (LLMs). This means that all interactions with the LLM are completely anonymized, protecting user identities and sensitive information. We safeguard against unauthorized access or data breaches, providing users with a secure and compliant environment. This privacy-centric approach allows businesses to confidently leverage AI capabilities without compromising personal data.



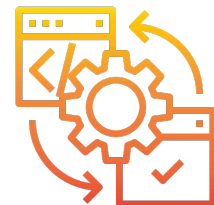
## Out-of-the-box Reporting

Our application offers comprehensive reporting capabilities tailored for various educational roles, including teachers, school principals, and district heads managing multiple schools.



## Integration with other LLMs

Latest advancements in AI technology for hint generation, offer superior performance and adaptability, thus making the system highly versatile.



## Technology Stack

**LLMs:** ChatGPT, Gemini, Claude, OpenSource

**Databases:** CloudSQL, MongoDB, Postgresql

**Validation Engine:** SymPy

**Cloud Services:** Cloud run, Azure container apps, AWS Fargate

**Backend Frameworks:** Django, Flask, FastAPI

# Workflow

Problem Generation from the Problem Bank



Step Validation



Next Step or Hint Generated



Problem Solved

# About Us

We are a data & AI consulting and research company - that provides Full Stack Data & AI services comprising web/app analytics, BI, Data Engineering & AI/ML. We operate with a clear focus on objectives and results, driving our efforts through an OKR-driven and process-oriented approach. We continuously push the boundaries of innovation to stay ahead of the curve. Our team of experts combines cutting-edge research with practical expertise to develop solutions that drive tangible results for our clients. With a relentless dedication to customer satisfaction, a rigorous process-driven approach, and a passion for innovation, DataSlush is your trusted Full Stack Data & AI partner.

