

July 2, 2025

Ambika Gangawar
MGM College of Engineering
Nanded, Maharashtra
India

Dear Ambika Gangawar,

Congratulations on your completion of a research-based internship, titled **Auto-Question Generation for Relational Algebra**, at **AksharaPlus, LLC.**, beginning **February 2025** and concluding **June 2025**.

During this internship, you contributed to our ongoing initiatives in adaptive learning technologies and educational software development. The internship was structured to provide hands-on research and development experience aligned with real-world challenges in supporting K-12 and college-level learning through intelligent systems.

You fulfilled all responsibilities, which included:

1. Working remotely under the guidance of AksharaPlus engineering staff,
2. Attending and contributing to weekly status meetings,
3. Presenting progress and receiving feedback,
4. Preparing a final report documenting technical work, acquired skills, and professional development.

Specific details about your project include the following:

Project Title: Auto-Question Generation for Relational Algebra

Project Goals: The project goals are: to automate the generation of questions on relational algebra operations; to generate questions at different difficulty levels (beginner to advanced); to create a variety of question types suitable for practice and assessment; to design a modular, extensible framework that can be scaled to other database management topics.

Project Deliverables: A Python-based backend module for generating questions using rule-based and heuristic logic, unit-tested classes for each relational algebra operation (Selection, Projection, Rename, etc.), a user interface (CLI or Streamlit)

for inputting schema and selecting operations; documentation and a presentation summarizing the project; and Mermaid-based ER diagram visualization for selected schemas.

Skills Developed: Deep understanding of relational algebra operations and database schema design; Python programming for rule-based logic and modular development; Implementation of heuristic mapping for business-friendly question generation; Streamlit for rapid UI development and user input handling; Writing clean, testable code using unit testing frameworks, and technical documentation and professional presentation creation.

We commend your commitment, collaboration, and initiative throughout the internship. AkshaPlus, LLC will serve as a professional reference, should you choose as you explore your career opportunities.

We wish you continued success in academic and professional pursuits and thank you for your valuable contributions to AksharaPlus, LLC.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Dhana Rao', is positioned above the printed name.

Dr. Dhana L. Rao
President and CEO

July 2, 2025

Shrutika Deshmukh
MGM College of Engineering
Nanded, Maharashtra
India

Dear Shrutika Deshmukh,

Congratulations on your completion of a research-based internship, titled **Auto-Question Generation for Relational Algebra**, at **AksharaPlus, LLC.**, beginning **February 2025** and concluding **June 2025**.

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We wish you continued success in academic and professional pursuits and thank you for your valuable contributions to AksharaPlus, LLC.

Sincerely,

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Dr. Dhana L. Rao
President and CEO

July 2, 2025

Vishal Dhavale
MGM College of Engineering
Nanded, Maharashtra
India

Dear Vishal Dhavale,

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Dr. Dhana L. Rao
President and CEO