

# SHAHANAS BEEGAM P

Chemistry Educator|STEM Education & AI Integration|Data Analytics & EduTech

## DETAILS

### ADDRESS

Pattambi, India

### PHONE

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## WEBSITES AND SOCIAL LINKS

### LinkedIn:

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### GitHub:

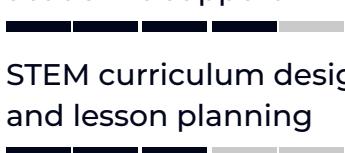
[github.com/shahanasbeegam](https://github.com/shahanasbeegam)

### Portfolio:

<https://shahanasbeegam.github.io/>

## SKILLS

Chemistry education and academic support



STEM curriculum design and lesson planning

AI-supported content development and review

## SUMMARY

Chemistry professional with experience in **STEM education, AI-supported content development, data analytics, and educational technology**. Holds an **MSc in Chemistry, BEd**, and is currently pursuing **MCA**, enabling an interdisciplinary approach that combines subject knowledge with technology and analytical thinking. Actively engaged in exploring the **role of artificial intelligence in enhancing STEM educational content and learning experiences**, with practical experience using **AI tools, simulations, and digital platforms** to support lesson planning, instructional design, and academic review.

## EXPERIENCE

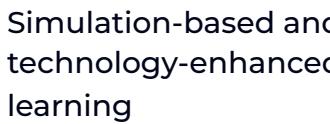
**Chemistry Educator / STEM Educator, Various Institutions**

Apr 2017-Current

- Teach **Chemistry** at secondary and higher secondary levels with focus on conceptual understanding
- Design lesson plans aligned with curriculum objectives and learner outcomes
- Integrate **AI tools, PhET Interactive Simulations, and Khanmigo (by Khan Academy)** to enhance engagement and concept clarity
- Conduct laboratory sessions and guide students in experimental procedures and interpretation
- Review and refine academic materials for clarity, accuracy, and instructional effectiveness

**STEM Educator & Program Coordinator,**

Jan 2020-Current



## Data cleaning, analysis, and interpretation

# Dashboard creation using Excel and Power BI

# Python for data handling and basic automation

## Digital and blended teaching workflows

AI Tools

- Delivered interdisciplinary STEM programs integrating **Chemistry, coding fundamentals, introductory AI concepts, robotics, and ICT**
  - Designed hands-on and simulation-based learning experiences
  - Coordinated program delivery with emphasis on quality, documentation, and learner engagement

## Data Analytics Intern (Remote), Mentorness

## Remote

Jun 2024-Jul 2024

- Performed data cleaning, transformation, and analysis using **Excel, SQL, and Python**
  - Created dashboards using **Power BI** to summarize trends and insights
  - Supported structured reporting and data accuracy workflows

## Data Analyst Trainee (Remote), Trinuity

Apr 2024-Dec 2024

- Conducted exploratory data analysis
  - Built interactive dashboards using **Power BI**
  - Developed attention to detail in data validation and reporting

# EDUCATION

Amity University Online, MCA,

2024-2026

## Ongoing

**University of Calicut, B.Ed, Physical Science**

2021-2023

University of Calicut, M.Sc Chemistry, Chemistry  
2017-2019

## CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

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- State Eligibility Test (SET) – Qualified
- Kerala Teacher Eligibility Test (KTET) – Category II & III – Qualified
- Central Teacher Eligibility Test (CTET) – Qualified
- Cambridge Teaching Standards & International Pedagogy – UP Educators
- Teaching in the 21st Century – Centre for Advanced Learning
- STEM Education: What It Is and What It Is Not – Sharjah Education Academy
- Python for Data Science
- ICT in Education

## RESEARCH PROJECT

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### **Role of AI in Enhancing STEM Educational Content and Learning Experience** Secondary Research Project

- Conducted a structured literature review on **AI applications in STEM education**
- Analyzed the impact of **AI-driven tools, simulations, and adaptive learning platforms** on student engagement and understanding
- Examined best practices for integrating AI into lesson design and instructional workflows
- Identified challenges, ethical considerations, and future opportunities for AI-supported STEM learning

## TOOLS & TECHNOLOGIES

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- **AI Tools:** ChatGPT, Google Gemini, Claude AI
- **Simulation & EdTech:** PhET Interactive Simulations, **Khanmigo (Khan Academy)**
- **Design & Visuals:** Adobe Firefly, Canva
- **Data & Analytics:** Microsoft Excel, Power BI, SQL, Python
- **Collaboration Platforms:**

- **STEM Tools:** Arduino

## PROFESSIONAL INTERESTS

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- AI integration in STEM education
- Technology-enhanced chemistry teaching
- Data-informed educational practices
- Interdisciplinary STEM initiatives

## REFERENCES

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Professor, University of Calicut

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