Rizwan Ali

Bridging Abstract Algebra & Python for Real-World Solutions

+91 98975 11437 rizwanrka826@gmail.com Delhi, India github.com/KhanRiyazi

Maths+Python YouTube

> *"Transforming mathematical abstraction into executable solutions through Python - creating bridges between theory and practice."*

Algebra+Python Synergy

I specialize in **operationalizing abstract algebra** through Python implementations that solve real-world problems. My unique value lies in:

- **Conceptual Translation:** Converting complex algebraic theories into **interactive Python modules**
- **Pedagogical Engineering:** Designing **Jupyter-based learning paths** that reveal mathematical beauty through code
- **Solution Patterns:** Developing **reusable algebraic templates** for common problem domains

Professional Experience

Lead AI Pedagogy Specialist

2024-Present

Make Tomorrow Foundation, Delhi

- Created **"Algebraic Thinking with Python" curriculum** improving problem-solving scores by **63%**
- Developed **72 visual proof notebooks** connecting abstract concepts to computational implementations
- Pioneered **student-generated problem system** where learners create/share Python-based algebra challenges

Python Automation Developer (Volunteer)

2018-2021

American Owain James Foundation

- Built **data pipeline automation** processing **10,000+ records** using **Python + Selenium**
- Designed **algebraic pattern recognition** system for educational content analysis
- Implemented **automated reporting tools** saving **150+ hours/year** in manual work

AI Curriculum Pioneer

2023-2024

Muskan Dreams Foundation, Lucknow

- Developed **"Algebraic Structures Explorer"** - interactive Python tool for visualizing abstract concepts
- Trained **85 teachers** in **computational algebra teaching methods**

Algebra+Python Projects

Interactive Learning Portals

2024

- GitHub Links Portal - Central hub for all educational projects
- Interactive Learning Platform - Deployed algebra+Python tutorials
- MIT Scratch Projects - Visual programming for mathematical concepts

Polynomial Problem Solver

2023

- Created **interactive solver** demonstrating Galois theory applications through Python
- Implemented **step-by-step visualization** of root-finding algorithms

Matrix Algebra Toolkit

2022

- Built **educational package** for linear transformations with visual proofs
- Used in **15 schools** to teach abstract concepts through code

Technical Skills

Abstract Algebra | Computational Mathematics | Mathematical Modeling | Python (Advanced) | NumPy/SymPy | Jupyter Notebooks | Selenium | Automation | Curriculum Design | AI Education | GitHub | Web Deployment | Scratch Programming

Education

M.Sc. Computer Languages

2020-2022

Aligarh Muslim University

Thesis: **"Algebraic Structures Through Computational Lenses"**

B.Ed (Mathematics)

2012-2013

Al-Barkaat Institute of Education

B.Sc (Mathematics)

2008-2011

MJP Rohilkhand University

Professional Highlights

- Featured speaker at **PyCon India 2022** - "Teaching Abstract Algebra Through Python"
- Recipient of **Innovative STEM Educator Award** (2023)
- Author of **"From Equations to Algorithms"** tutorial series
- Creator of YouTube tutorial series blending mathematics with Python programming

Volunteer Work

Open Source Contributor

2020-Present

Python Mathematics Education Projects

- Developed **interactive algebra modules** for open-source learning platforms
- Created **automated testing systems** for educational codebases
- Maintain active GitHub repository at **github.com/KhanRiyazi**