



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in

Approved by  Affiliated to  UGC Autonomous  10 Programs Accredited by  Grade A++ in  All India Ranking 151-200 Band 

COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

**46**  
years

## Department of Artificial Intelligence and Machine Learning

Organizes  
**Short Term Training Program**  
(Value added Course)

on  
**Upgrading Skills in MongoDB.**

(22nd March 2025, 29th March 2025, 12th April 2025, 19th April 2025, 26th April 2025)

**09.30 AM to 04.30 PM**

### Objectives:

- Enable students and faculty to enhance their understanding of database concepts and their ability to apply them using MongoDB.
- Enable students to confidently utilize MongoDB for database management in real-world applications and job placements.
- Enable students to design and implement database solutions using MongoDB's document-oriented approach.

### Resource Persons:

1. **Mr. Panduraju Pagidimalla** (Ph.D.), Assistant Professor, Dept of AIML, CBIT.
2. **Dr. Y. Ramadevi**, Professor & Head, Department of AIML
3. **Dr. Prabhakar Kandukuri**, Professor, Dept of AIML, CBIT.
4. **Smt. D. Naga Jyothi**, Assist. Professor, Department of AIML

**Intended Participants:** UG/PG Students, Faculty, Research Scholars, Industry Professionals

**Registration Link:** <https://forms.gle/mHZQ8Lhb7SeCs65R9>

**WhatsApp Group Link:** <https://chat.whatsapp.com/IfefmHGSeFnI0cjfVXBjIf>

### Note:

- **Last Date for Registration: 20-03-2025**
- **No Registration Fee.**
- **An e-certificate will be issued to the participants.**
- **80% Attendance is mandatory for receiving a participation certificate.**

**75% marks in exam conducted at the end of course.**

**Venue: AIML Lab3, Lab4**

**For Registration & Other Details, Contact:**

**Dr. Prabhakar Kandukuri**, Professor, CBIT,  
AIML Department.

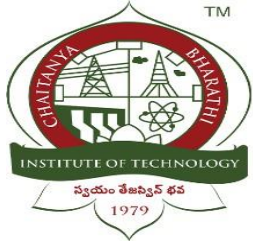
Mobile Number: 9705795005

### Faculty Coordinators:

**Dr. Y. Ramadevi**  
Professor & Head, Department of AIML  
**Dr. Prabhakar Kandukuri**,  
Professor, CBIT, AIML Department.

### CO-COORDINATORS

**Dr. Y. C. A. Padmanabha Reddy** Assoc. Professor, Department of AIML  
**Smt. K. Mary Sudha Rani**, Assistant Professor, Department of AIML  
**Smt. G. Kavita**, Assist. Professor, Department of AIML  
**Smt. D. Naga Jyothi**, Assist. Professor, Department of AIML  
**Mr. Panigrahi Srikanth**, Assist. Professor, Department of AIML



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## Upgrading Skills in MongoDB

(22nd March, 29th March, 12th April, 19th April, 26th April, 2025)

Organized by

**Department of Artificial Intelligence and Machine Learning**

### About the Course:

- This short-term training program will include lectures, case studies, and hands-on experiments using MongoDB. The course will cover fundamental database concepts, NoSQL principles, and practical applications of MongoDB for data storage, retrieval, and management. MongoDB is widely used for scalable web applications, big data processing, and cloud-based distributed systems.
- No Registration Fee.**

### SCHEDULE

	9:10 AM to 11:10 AM	11:15 to 12:45 PM	12:45 to 1:15 PM	1:15 PM to 3:00 PM	3:05 PM to 4:20 PM
Week-1 (22-03-2025)	<b>Inaugural Session</b> Welcome, Overview of Course Objectives (Dr. Y. Ramadevi)	<b>Introduction to MongoDB</b> Overview, NoSQL vs SQL, Key Features (Mr. P. Panduraju)	LUNCH BREAK	<b>CRUD Operations</b> Create, Read, Update, Delete with Python (Dr. K. Prabhakar)	Practice and Doubts clarification (Dr. K. Prabhakar & Smt. G. Kavita)
Week-2 (29-03-2025)	<b>MongoDB Data Model</b> Collections, Documents, Schema Design (Mr. P. Panduraju)	<b>Indexing and Performance</b> Creating Indexes, Performance Tuning (Smt. D. Naga Jyothi)		<b>Aggregation Framework</b> Pipeline Stages, Grouping, Sorting (Mr. P. Panduraju)	Practice and Doubts clarification (Dr. Y. C. A. Padmanabha Reddy & Mr. Panigrahi Srikanth )

Week-3 (12-04-2025)	<b>MongoDB with Python</b> PyMongo Basics, Connecting to Database <b>(Mr. P. Panduraju)</b>	<b>Advanced CRUD Operations</b> Update Operators, Bulk Writes <b>(Dr. K. Prabhakar)</b>	<b>Error Handling and Transactions</b> Handling Failures, Transactions in MongoDB <b>(Mr. P. Panduraju)</b>	Practice and Doubts clarification <b>( Smt. K. Mary Sudha Rani &amp; Smt. G. Kavita)</b>
Week-4 (19-04-2025)	<b>Data Modeling with Python</b> One-to-One, One-to-Many, Many-to-Many Relationships <b>(Smt. D.Naga Jyothi)</b>	<b>Data Validation</b> Schema Validation, JSON Schema <b>(Mr. P. Panduraju)</b>	<b>Working with Large Datasets</b> Importing and Exporting Data, Best Practices <b>(Mr. P. Panduraju)</b>	Practice and Doubts clarification <b>(Dr. Y. C. A. Padmanabha Reddy &amp; Mr. Panigrahi Srikanth )</b>
Week-5 (26-04-2025)	<b>Backup and Restore</b> mongodump, mongorestore, Atlas Snapshots <b>(Mr. P. Panduraju)</b>	<b>Security and Authentication</b> Role-Based Access Control, Encryption <b>(Mr. P. Panduraju)</b>	Final Project Review, Best Practices, Feedback <b>(Dr. Y. C. A. Padmanabha Reddy &amp; Smt. K. Mary Sudha Rani)</b>	Exams and Valedictory <b>(Smt. G. Kavita)</b>

**WHO SHOULD ATTEND: UG and PG Students, Faculty, and Research scholars**

**CERTIFICATE: Mandatory requirements**

- 1. Should have at least 80% of attendance after successful completion of the course**
- 2. 75% marks in exam conducted at the end of course**

**Faculty Team:**

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