



Empowering Talent.
Building Futures.
Learn • Build • Grow



MERN STACK + AI INTERNSHIP PROGRAM

Inacademic Premium Industry-Grade Curriculum Powered by Tiiron Technologies Pvt. Ltd.

Program Overview

Duration: 2 Months

Schedule: Mon–Fri

Mode: Training + Product Development

Batch Size: 15 Students (Starting From 20 July)

Fee: ₹3,000 (inclusive of all resources)

Instructor: From Product-based Companies

Curriculum Breakdown

React.js

- Foundations & React basics
- JSX & components
- State & events
- Hooks & Router

Node.js

- Git, GitHub & team workflow
- Node.js fundamentals
- Your first server

Express

- Routing and middleware
- REST API design
- CRUD Operations
- Hands-on build

MongoDB

- Thinking in NoSQL
- Mongoose
- Frontend meets backend
- Deployment

Live Product Experience

Work on our live projects with real feature development, bug fixing, and deployment. Gain hands-on experience with industry-standard practices.

Learning Experience

Our internship provides a startup-like environment, featuring daily tasks, team collaboration, and code reviews. Experience the workflow of a real-world development team.

Outcomes and Opportunities

- Internship Certificate
- Training Certificate
- Internal Evaluation
- Letter of Appreciation
- Live Product Experience on Tiiron LMS / Tiiron ERP / Job Portal / AI-powered apps

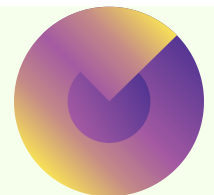
Why This Program?

This program is designed to simulate how real engineering teams work — not just how technologies are taught. Instead of working on dummy projects, you'll contribute to **live systems**, follow **industry workflows**, and understand how real engineering teams operate.

- Work on **real products**, not practice assignments
- Experience **team collaboration, Git, and deployment**
- Build a **portfolio that reflects actual work**

*By the end, you won't just know technologies — you'll understand how to **apply them in real-world**.*

READY TO BECOME A FULL STACK ENGINEER?



If you're serious about moving beyond tutorials and building real systems, this is where it starts.

Contact Us:

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🌐 <https://inacademic.com>

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📍 Head Office: Lucknow, Uttar Pradesh, India - 226010

Scan to Apply



Tiiron Technologies Pvt Ltd

MSME / Startup India / MCA / ISO 9001 Certified



Program: MERN Stack Training + Internship Program

Learn the topics that actually matter when building real products—not just practice projects.

Phase 1: React & Advanced Frontend

1. Modern Frontend: HTML5, CSS3 & JavaScript

- The MERN developer mindset
- Semantic HTML5, accessibility (ARIA), Forms & Input Collection
- CSS 3: Fundamentals, Properties, Styling HTML Elements
- JavaScript ES2024: async/await, modules, destructuring
- DOM manipulation, event loop, closures, prototypes
- Browser APIs: Fetch, LocalStorage, Web Workers
- Git, GitHub & team workflow

2. React 19 & Advanced State Management

- Setup your complete development environment
- React 19 fundamentals: JSX, hooks, component lifecycle
- Tailwind CSS 3/Material UI,: utility-first design system
- Custom hooks, context API, useReducer patterns
- Redux Toolkit: slices, thunks, RTK Query
- React Router v6: nested routes, protected routes
- Form handling: React Hook Form + Zod validation

Phase 2: Node.js Foundation

1. Node.js & Express.js Backend Engineering

- Node.js architecture: single-threaded non-blocking I/O explained
- Node.js streams, Buffer, EventEmitter pattern
- Express.js 5: routing, middleware stack, request lifecycle
- Building RESTful APIs: HTTP methods and status codes
- File uploads with Multer, image processing with Sharp
- Rate limiting, CORS, Authentication, JWT, Hashing

Phase 3: Database Engineering & Authentication

1. MongoDB, Mongoose & Database Design

- Database Concepts, SQL vs NoSQL
- MongoDB, Compass, Atlas
- Mongoose: schemas, models, virtuals, middleware hooks
- Schema design: embedding vs referencing, denormalization strategies
- MongoDB aggregation pipeline: \$match, \$group, \$lookup, \$facet
- Indexes: compound, text, geospatial, explain() for optimization

Phase 4: DevOps Engineering

1. Docker, Kubernetes & CI/CD Pipelines

- Docker: multi-stage Dockerfile for Node.js, .dockerignore optimization
- Docker Compose: MERN stack local dev with hot-reload
- Nginx as reverse proxy, load balancer, SSL termination
- Kubernetes: Pods, Deployments, Services, HPA (auto-scaling)
- GitHub Actions: Node.js CI (lint, test, build, push)
- Secrets management with GitHub Secrets, AWS Secrets Manager
- Deployment strategies: rolling, blue-green, canary

Phase 5: AI Integration & Full Stack Capstone

1. AI Integration: LLMs, RAG & Intelligent Features

- LLM fundamentals: prompt engineering, tokens, context windows
- OpenAI API: chat completions, function calling, embeddings
- Vercel AI SDK: useChat, useCompletion, streaming UI components
- LangChain.js: chains, agents, tools, document loaders, memory
- Retrieval-Augmented Generation (RAG): chunking, embedding, retrieval
- Vector stores: Pinecone, pgvector, Chroma for semantic search
- AI-powered features: smart search, content summarization, auto-tagging
- Cost optimization, rate limiting, responsible AI guardrails

Phase 6: Live Product Internship

1. Real Product Sprint — Tiiron Technologies Live Products

- Product onboarding: codebase tour, architecture, dev environment setup
- Agile workflow: daily standups, sprint planning, story points, retrospectives

- Feature development on Tiiron LMS / ERP / Job Portal
- Code review culture: PR templates, review checklist, constructive feedback
- API collaboration: consuming and providing APIs with frontend/backend teams
- Performance optimization: profiling real queries, lazy loading, caching
- Release management: changelog, versioning, hotfix workflow

About Us

Inacademic is an initiative by Tiiron Technologies dedicated to bridging the gap between academic theory and real-world development for college students. We provide a platform for hands-on experience and practical skill-building.

About Tiiron Technologies

Building Technology That Powers Modern Education

Tiiron Technologies is a technology company focused on developing AI-powered education platforms, institutional software, and practical learning ecosystems that help schools, colleges, and organizations embrace the future of education.

Our Mission

To build technology that makes learning more practical, institutions more efficient, and education more future-ready.



Tiiron LMS

AI-Powered Learning Platform

An interactive learning platform where students practice, improve, and master concepts through real-time assessments and personalized learning.

- AI-Powered Learning
- Interactive Practice
- Assessments & Analytics
- Digital Classroom
- Progress Tracking

Tiiron Academy

Future-Ready Learning for Schools

We help schools establish Robotics, AI, and Coding Labs with structured curriculum, industry-trained mentors, and hands-on learning for Class 1 to 12.

- Robotics Lab Setup
- AI & Coding Lab Setup
- Curriculum (Class 1-12)
- Dedicated Trainers
- Theory + Practical Learning

Tiiron ERP

AI-Powered Institution Management

A next-generation ERP solution to simplify school administration, automate workflows, and improve operational efficiency.

- Student Management
- Attendance
- Fee Management
- Examination
- HR & Administration
- Reports & Analytics

Inacademic

Industry Learning Ecosystem

An industry-focused platform where students experience how real technology products are designed, built, deployed, and maintained through practical training and live projects.

- Product Development
- Full Stack Development
- AI & Emerging Technologies
- Industry Projects
- Career Readiness

One Technology Partner. Multiple Solutions.

Tiiron LMS • Tiiron ERP • Tiiron Academy • Robotics Labs • AI & Coding Labs • Trainers • Curriculum • Inacademic Industry Learning Ecosystem

An integrated technology ecosystem designed to transform learning, streamline institutions, and prepare students for the future.

The goal is not just knowledge, but the ability to build, contribute, and think like a real developer. This is where learning ends—and real development begins.



An Industry-Focused
Internship & Learning Initiative



LEARN



BUILD



GROW



Tiiron Technologies Pvt. Ltd.



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Enhancing Learning. Building Future Talent.



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