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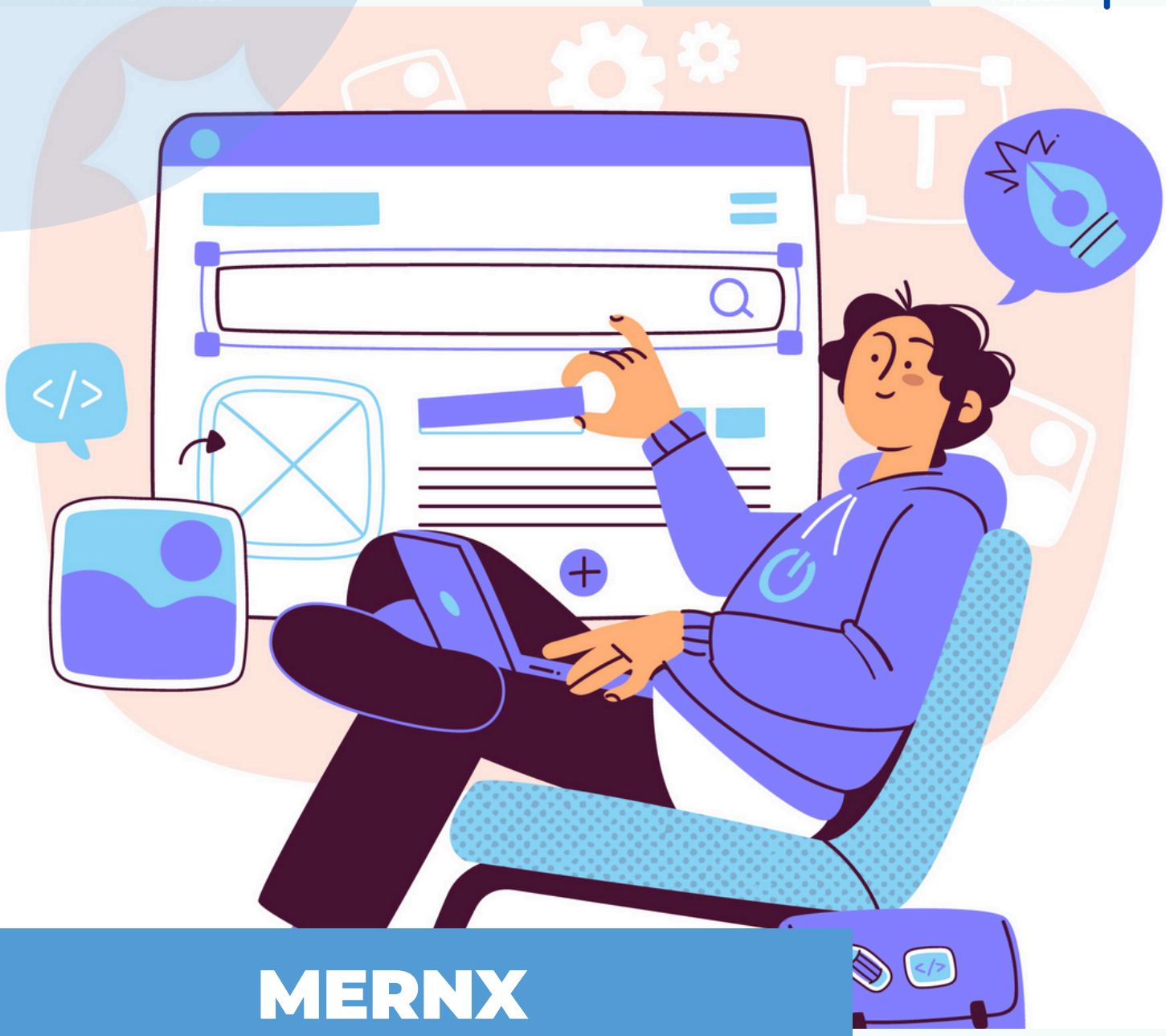

MERNX
THE INDUSTRY CROSSOVER

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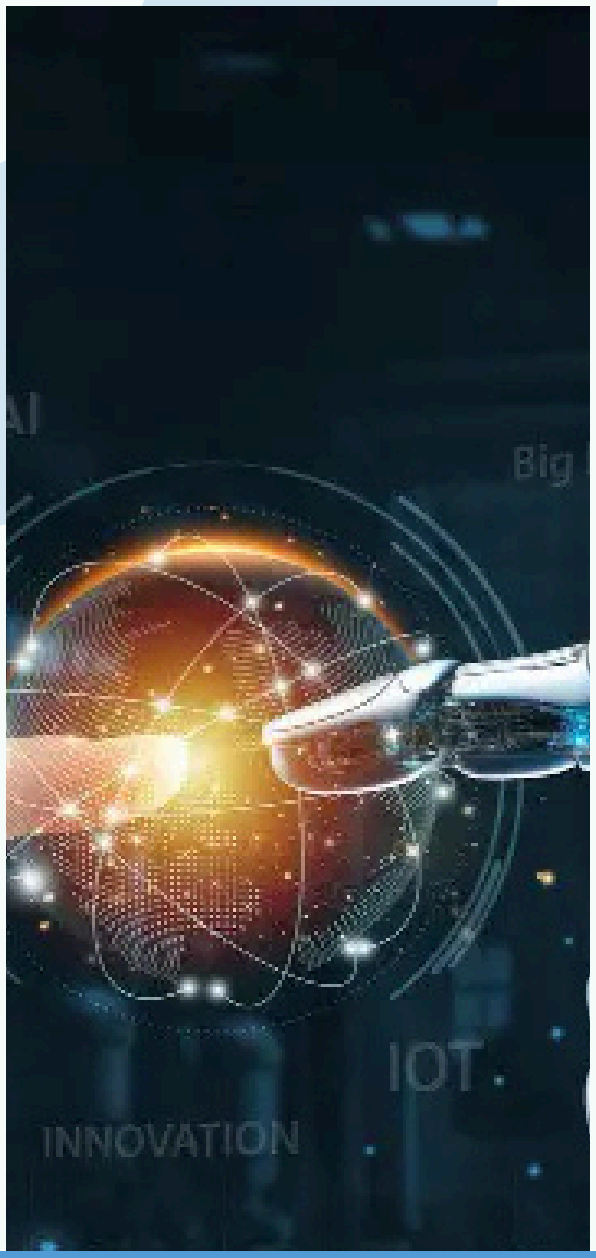

OUR BACKGROUND

PraxisForge was founded by a team of engineers, educators, and innovators from Microsoft, Google, Amazon, Samsung R&D, McKinsey, WB, Volvo, and institutions like IIT Madras, IIT Mandi, IIM Ahmedabad, and IIM Bangalore.

With decades of combined experience in tech, education, and mentorship, we built PraxisForge to close the gap between theory and industry practice. Our remote-first, project-based model brings real-world skills to learners—anytime, anywhere.

We don't just teach. We build the next generation of innovators.

OUR PHILOSOPHY

Education should unlock potential not just deliver information

At PraxisForge, we turn curiosity into capability through real-world projects, guided by mentors who've built the future and now help you build yours."

— PraxisForge

OUR STORY

At PraxisForge, our journey began with a simple but powerful belief: real learning happens when theory meets action.

Two Cutting-Edge Career Tracks:

Founded by a passionate team of technologists, educators, and industry veterans, our mentors hail from the world's most innovative institutions — including Microsoft, Google, Amazon, Samsung R&D, McKinsey, Warner Bros., Volvo, and leading academic hubs like IIT Madras, IIT Mandi, IIM Ahmedabad, and IIM Bangalore.

We saw a critical need: while students were mastering theory, they lacked real-world exposure, mentorship, and project-based application. So, we set out to change that — by building a remote-first platform where students don't just study what could be done—they actually do it.

OUR ACHIEVEMENT

- Trained over 800+ students across India
- Completed 60+ real-world remote projects
- Partnered with leading schools and colleges
- Built a mentor community from top global companies and institutions
- Enabled learners to build portfolios that speak louder than grades

Why We're Called PraxisForge :

- Praxis: The act of applying theory to practice
- Forge: A place of transformation, creation, and strength

At PraxisForge, we empower learners to apply what they know and forge who they're meant to become — with industry-grade tools, hands-on projects, and mentorship from the best minds in tech and business.

Whether you're a school student exploring your first line of code, a college student preparing for your tech career, or an educator seeking to modernize your curriculum — PraxisForge is where your future is built.

OUR OBJECTIVES

- Bridge the Gap between academic theory and real-world industry practice through project-based, mentor-led learning.
- Empower Students from diverse backgrounds to build practical skills, confidence, and career-ready portfolios.

- Foster Innovation by encouraging problem-solving, creativity, and tech-driven thinking from an early age.
- Democratize Access to high-quality, remote-first education — regardless of location or school infrastructure.

Two Cutting-Edge Career Tracks:

- Build a Community of learners, mentors, and institutions aligned with the future of digital education.
- Promote Lifelong Learning: Cultivate a culture of continuous growth through evolving content, mentorship, and community engagement.
- Strengthen Educator Partnerships: Collaborate with schools and colleges to bring future-ready content into classrooms with ease and flexibility.
- Create a Global Learning Community: Connect learners, mentors, and institutions across borders through live interaction and remote collaboration.

Every learner gets:

- *Live weekly mentorship*
- *Industry exposure*
- *Resume-grade projects*
- *Final demo showcase with feedback*

WHY YOU SHOULD ENROLL WITH US ?

At PraxisForge, our programs go far beyond theory. Whether you're diving into Data Science or mastering the MERN Stack, you'll get real industrial exposure from day one.

What Makes Us Different

- **Industrial Training That Matters:** Get trained in real-world scenarios, with practical implementation of tools and workflows used in the tech industry today.
- **Live Industry Expert Interactions:** Every week, meet and learn from professionals at top firms like Amazon, Google, and Microsoft. Gain mentorship, ask questions, and hear what actually happens inside tech teams.

Two Cutting-Edge Career Tracks:

Data Science Program (10 Weeks)
DATAX: The Industry Crossover

Gain hands-on experience with:

- Python, Pandas, NumPy, Matplotlib
- Data wrangling and machine learning models
- Model optimization and real-time dashboards

Who should join: Future data analysts, AI enthusiasts, and research-driven minds.

MERN Stack Development Program (10 Weeks)
MERNX - The Industry Crossover

Master full-stack web development:

- *React.js frontend with Tailwind CSS*
- *Node.js and Express.js backend with MongoDB*
- *REST APIs, authentication, and deployment*

Who should join: Aspiring full-stack developers, startup founders, and freelance coders.

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MERN Stack Development Program (10 Weeks)

MERNX : The Industry Crossover

- Build the Web from Scratch to Scale
- Launch your developer journey with full-stack web expertise.
- **You'll Learn:**
- Frontend development with React.js and Tailwind CSS
- Backend logic using Node.js, Express.js, and MongoDB
- RESTful APIs, user authentication, and production deployment
- **Perfect for:**
- Aspiring full-stack developers, startup founders, and freelance coders ready to ship real projects.

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OUR CURRICULUM

10-WEEK MERNX : THE INDUSTRY CROSSOVER

Week 1: Dev Environment & JavaScript Turbocharge

Learning Objectives

- Set up MERN development environment
- Master modern JavaScript fundamentals (ES6+)

Topics & Subtopics

1. **Tooling & Setup**
   - VS Code setup, Dev Containers
   - Node Version Manager (nvm)
2. **Git & GitHub Actions**
   - Branching workflows
   - Simple CI with linting and testing on push
3. **JavaScript Deep Dive**
   - let/const, arrow functions, spread/rest
   - Promises and async/await

Week 2: Node.js & Express Foundations

Learning Objectives

- Build REST APIs using Express
- Understand middleware and routing

Topics & Subtopics

1. **Node.js Core**
   - Event loop, non-blocking I/O
   - File system and HTTP modules
2. **Express Essentials**
   - Middleware and routing chains
   - Input validation using Joi
3. **Dev Tools**
   - Nodemon for hot reloads
   - Dotenv for configuration

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10-WEEK MERNX : THE INDUSTRY CROSSOVER

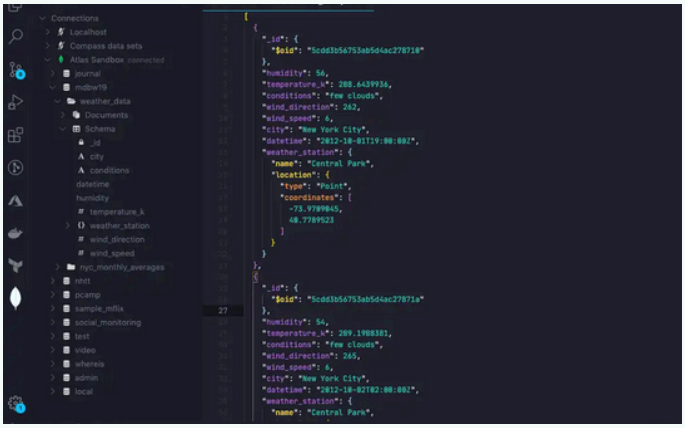
Week 3: MongoDB & Mongoose Magic

Learning Objectives

- Create schemas using Mongoose
- Perform CRUD with MongoDB

Topics & Subtopics

1. **MongoDB CRUD Basics**
   - Documents and collections
   - Indexes and aggregation
2. **Mongoose ODM**
   - Models, schemas, middleware
   - Populating and embedding
3. **MongoDB Atlas Setup**
   - Atlas vs local Mongo
   - MongoDB Compass usage



Week 4: React Fundamentals & Component Craft

Learning Objectives

- Build frontend with React
- Work with JSX, props, and state

Topics & Subtopics

1. **React Setup**

- Create React App vs Vite
- Project folder structure

2. **Core React Concepts**

- Functional components and hooks
- State management and props drilling

3. **Styling**

- Tailwind CSS
- Styled-components and CSS modules

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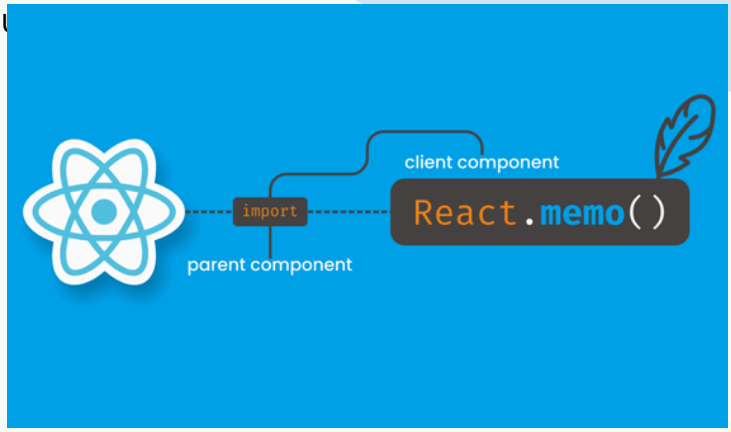
Week 5: Advanced React & State Management

Learning Objectives

- Use React Router and dynamic routes
- Manage state using Context API and Redu
- Optimize rendering and performance

Topics & Subtopics

1. **Routing**
   - Nested and protected routes
   - Lazy loading and code splitting
2. **State Management**
   - Context API and useReducer
   - Redux Toolkit and slices
3. **Performance Tools**
   - React.memo, useMemo, useCallback



Week 6: Full-Stack Integration & CRUD Ops

Learning Objectives

- Connect frontend to backend
- Handle CORS and API auth
- Implement form and file handling

Topics & Subtopics

1. **HTTP Communication**
   - Axios vs fetch API
   - Interceptors and error handling
2. **CORS & Auth Handling**
   - Express CORS setup
   - Frontend route guards
3. **Forms & Uploads**
   - React Hook Form, Yup validation
   - Upload files to backend endpoints

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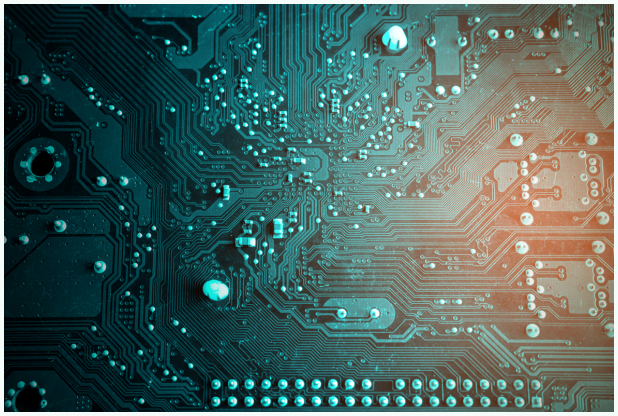
Week 7: Authentication & Authorization

Learning Objectives

- Secure APIs using JWT
- Manage sessions and cookies
- Implement RBAC (Role-Based Access Control)

Topics & Subtopics

1. **JWT Authentication**
   - Signing, verification, and refresh tokens
   - Storage strategies
2. **Session Handling**
   - Express-session, Redis store
   - CSRF prevention
3. **Role-based Access Control**
   - Route middleware logic
   - Role permissions: user/admin



Week 8: Real-Time & Microservices

Learning Objectives

- Implement real-time features with WebSockets
- Design basic microservices
- Use pub/sub messaging patterns

Topics & Subtopics

1. **WebSockets**
   - Socket.io server/client
   - Rooms and namespaces
2. **Microservices Setup**
   - Docker basics
   - API Gateway pattern
3. **Pub/Sub**
   - Redis pub/sub
   - Event-driven communication

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Week 9: Testing, Performance & Monitoring

Learning Objectives

- Write backend/frontend tests
- Optimize queries and app speed
- Set up logging and monitoring

Topics & Subtopics

1. **Testing Tools**
   - Jest, Supertest, Cypress
   - React Testing Library
2. **Performance Checks**
   - MongoDB explain plans
   - Lighthouse audits
3. **Monitoring**
   - Winston/Log4js logging
   - Sentry integration

Week 10: Capstone & Deployment

Learning Objectives

- Build and deploy full-stack apps
- Use CI/CD pipelines
- Deliver live demos and get feedback

Topics & Subtopics

1. **Capstone Project**
   - MVP planning and team roles
   - 48-hr build sprint
2. **Deployment**
   - Heroku, Netlify, Vercel
   - Docker deployment
3. **Final Showcase**
   - Peer reviews and mentor feedback
   - Presentation and Q&A

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THANK YOU

"Together, we can forge pathways to innovation, confidence, and career readiness. Your Interest fuels our mission to empower future innovators."

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Ignite passion. Build skills. Create change—with PraxisForge by your side.