PRAXISFORGE

Thynk Unlimited

Proposal

DATAX
THE INDUSTRY
CROSSOVER

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PRAXISFORGE

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PRAXISFORGE

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

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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.

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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.

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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*

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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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Data Science Program (10 Weeks)

DATAX: The Industry Crossover

- Get hands-on with real-world data and tools used by industry professionals.

You'll Learn:

- Python for analysis and automation
- Data manipulation with Pandas, NumPy, and Matplotlib
- Data wrangling, preprocessing, and machine learning workflows
- Model optimization and live dashboard visualizations

Perfect for:

- Future data analysts, AI enthusiasts, and research-driven minds seeking structured, applied learning.

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OUR CURRICULUM

10-WEEK DATAX: THE INDUSTRY CROSSOVER

Week 1: Python Foundations & DevOps Basics

Learning Objectives

- Master Python fundamentals: async, CLI, env setup
- Manage API keys securely

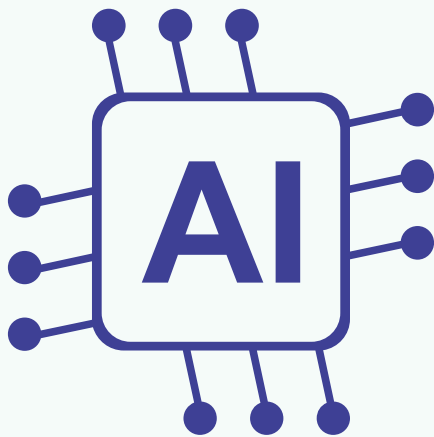**Topics & Subtopics**

1. **Python Speed run**
   - Comprehensions & generators
   - Asyncio for better performance
2. **Git & CI/CD**
   - Git-flow essentials
   - GitHub Actions basics
3. **API Key Management**
   - .ENV usage with python-dotenv
   - Rate-limiting strategies

Week 2: Prompting & Generative AI Logic

Learning Objectives

- Understand prompt structure & design
- Test and evaluate prompt responses

Topics & Subtopics

1. **Prompt Structure**
   - Roles: system, user, assistant
   - Sampling settings: temperature, top-k/p
2. **Persona Crafting**
   - Tone/style templates
   - Dynamic role switching
3. **Prompt Evaluation**
   - Win/loss scoring with AI
   - UI elements for testing responses

Week 3: Data Workflows with LangChain
Learning Objectives
- Learn how to use chains and agents effectively
- Build logic-based workflows
- Improve performance with caching

Topics & Subtopics
1. **LangChain Core Concepts**
   - Understanding Chains and Agents
   - Tool integration and callbacks
2. **Workflow Branching**
   - Conditional routing
   - Error handling strategies
3. **Caching Methods**
   - Redis usage
   - Response serialization

Week 4: Retrieval-Augmented Generation (RAG)
Learning Objectives
- Use embeddings to enhance AI memory
- Store and query data using vector databases
- Implement smart filtering

Topics & Subtopics
1. **Embeddings**
   - Comparing OpenAI and SentenceTransformers
   - Chunking strategies
2. **Vector Databases**
   - FAISS basics
   - Intro to Pinecone
3. **Filtering & Cleanup**
   - Time-to-live (TTL)
   - Trust scoring mechanisms

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Week 5: Multi-Modal Intelligence

Learning Objectives

- Combine text, vision, and audio models
- Work with transcription and TTS tools
- Build interactive interfaces

Topics & Subtopics

1. **Vision Models**
   - CLIP & SAM introduction
2. **Audio Intelligence**
   - Using Whisper for transcription
   - Voice synthesis tricks
3. **UI Development**
   - Streamlit/Gradio basics
   - Real-time updates

Week 6: Web Data & API Integration

Learning Objectives

- Use headless browsers for scraping
- Connect and combine APIs
- Create modular AI tools

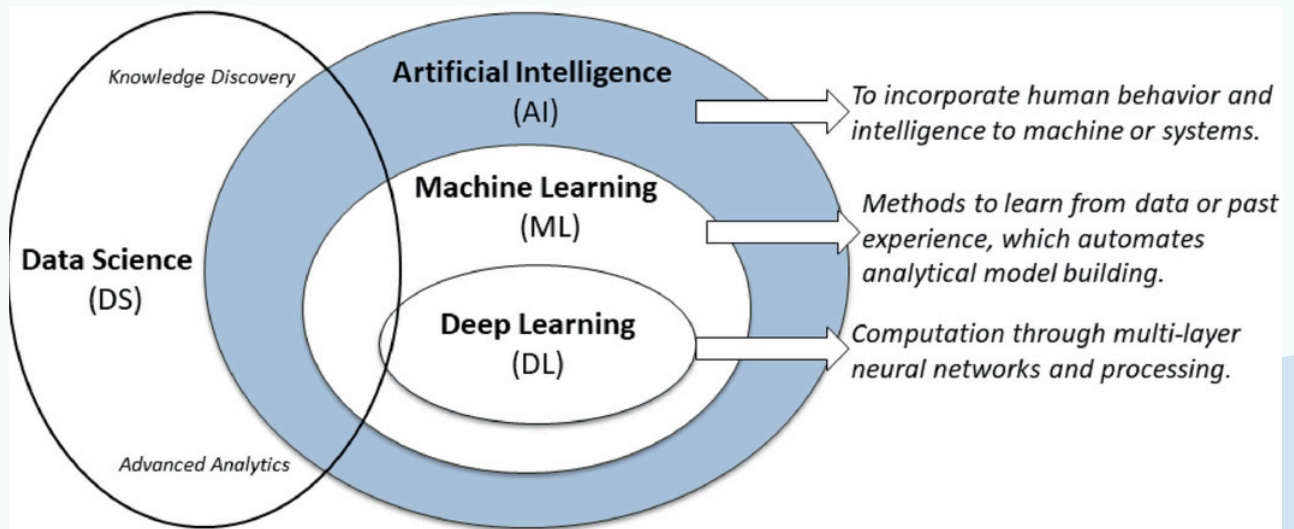**Topics & Subtopics**

1. **Web Scraping Tools**
   - Playwright vs. Selenium
   - Handling captcha ethically
2. **API Consumption**
   - Integrating SerpAPI, NewsAPI
   - Using WolframAlpha
3. **Tool Creation**
   - LangChain Tool SDK overview

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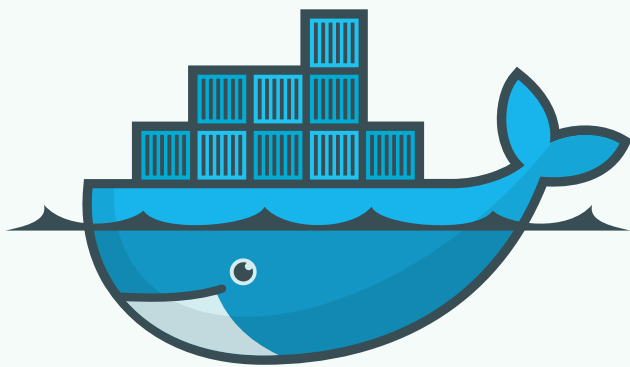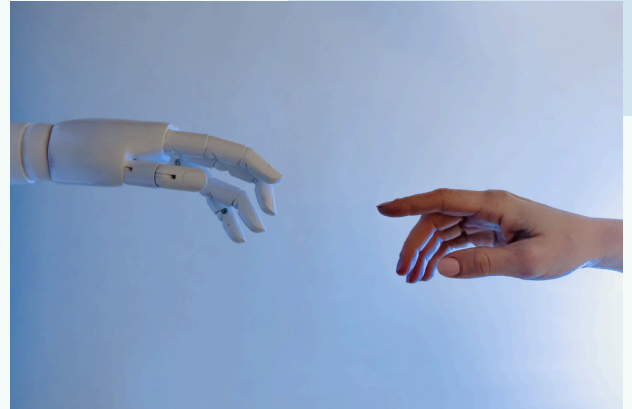## 10-WEEK DATAX:
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Week 7: Evaluation & QA Automation
Learning Objectives
- Apply reasoning methods to agent actions
- Build feedback loops into workflows
- Create automated test pipelines

Topics & Subtopics
1. **ReAct Methodology**
   - Thought/action separation
2. **Feedback Loops**
   - Reflexion techniques
   - Logging successes/failures
3. **QA Pipelines**
   - Prompt and handler testing
   - pytest basics

Week 8: Lightweight Deployment
Learning Objectives
- Deploy models on limited hardware
- Use Docker for scalable apps
- Integrate IoT sensor inputs

Topics & Subtopics
1. **Model Optimization**
   - ONNX, bitsandbytes
2. **Containerization**
   - Multi-arch Docker images
   - Kubernetes on Raspberry Pi (K3s)
3. **IoT Triggers**
   - MQTT protocols
   - Webhook integration

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Week 9: Plugin Ecosystems
Learning Objectives
- Design plugin systems for modular apps
- Track usage and engagement
- Prototype monetization options

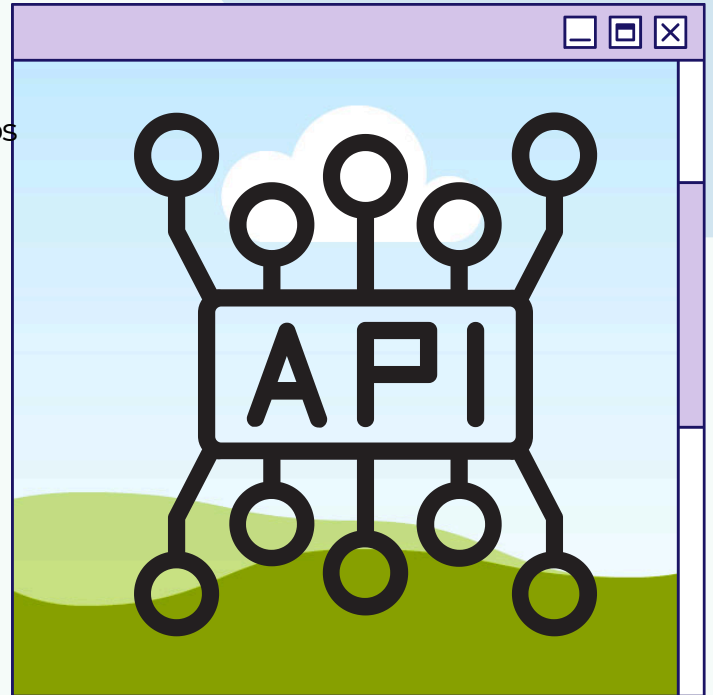**Topics & Subtopics**
1. **Plugin Design**
   - Python vs. JS plugins
   - Versioning and security
2. **Discovery & UIs**
   - Install flows
   - Metering usage
3. **Payments & APIs**
   - Micro-payment logic with Stripe
   - API-based pricing models

Week 10: Final Projects & Pitching
Learning Objectives
- Collaborate on real-world data science builds
- Present ideas with clarity
- Handle feedback and iteration
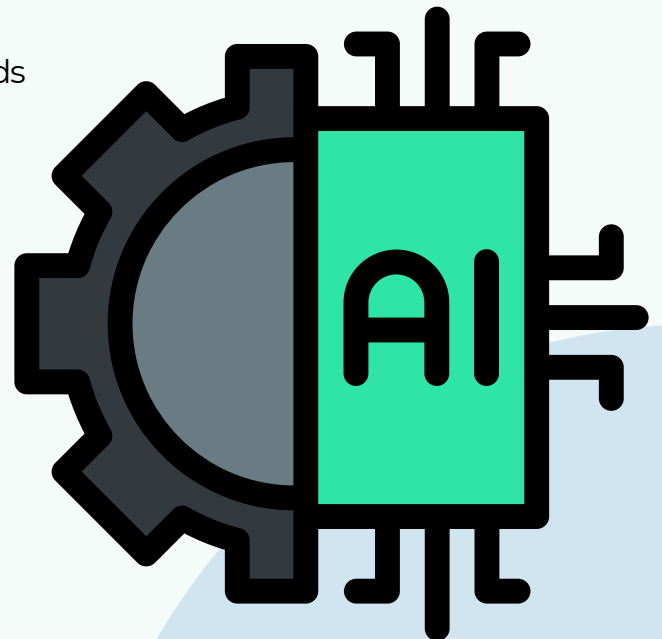
Activities
1. **Project Sprint**
   - Role assignments: PM, ML, DevOps, UI
   - Build and polish phase
2. **Demo Prep**
   - Presentation skills
   - Storytelling for tech demos
3. **Showcase**
   - Peer and mentor reviews
   - Rewards and recognition

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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.