DataLegos
CONNECTING DATA, CRAFTING INNOVATION.

📅 Career Catalyst Internship @DL – 12-Week Plan

📍 Weeks 1–4: Foundation, Problem Design, and Skill Building

Week 1: Discover & Define

- **Tasks:**
  - Identify student strengths and interests
  - Brainstorm & shortlist real-world problems (Gen AI, automation, data)
- **Deliverables:**
  - Personal skill map
  - One-line problem statement
- **Focus:**
  - Problem Identification
  - Career goal alignment
  - Examples:
    - Auto-responder using ChatGPT for student FAQs
    - Data alert system using n8n & Google Sheets

Week 2: High-Level Design

- **Tasks:**
  - Define problem clearly
  - Identify desired outcome & impact
  - Create solution overview diagram
- **Deliverables:**
  - High-level design document (Google Slide or Miro board)
- **Focus:**
  - Design Thinking
  - Workflow planning
  - Tools: Lucidchart, n8n flow builder

Week 3: Tech Stack & Research

- **Tasks:**
  - Research tools/libraries/platforms
  - Choose between Python scripts, n8n workflows, or hybrid
- **Deliverables:**
  - Tech stack justification document
  - GitHub repo setup
- **Focus:**
  - Technology Evaluation
  - Example:

- Use Pinecone + OpenAI for a document Q&A assistant
- Data pipeline: CSV → clean → visualize with Matplotlib

Week 4: Low-Level Design & Setup

- **Tasks:**
  - Create low-level design (modules/functions/flows)
  - Write mock APIs or UI sketches
- **Deliverables:**
  - Component-level design document
  - Local dev setup + basic skeleton in repo
- **Focus:**
  - System Design
  - Version control (Git)
  - Initial Test-Driven Development setup

📌 Weeks 5–10: Development and Testing

Week 5: Development Sprint 1 – Core Module

- **Tasks:**
  - Start with one functional block
  - Build with TDD principles
- **Deliverables:**
  - Working module + unit tests
  - Demo to peer group
- **Focus:**
  - Python classes or n8n node automation
  - Agile Scrum standups
  - Example: n8n flow to automate attendance sheet creation

Week 6: Development Sprint 2 – Integration

- **Tasks:**
  - Connect multiple modules (API, UI, data)
  - Validate intermediate results
- **Deliverables:**
  - Integrated prototype
  - Mid-internship review deck
- **Focus:**
  - API usage
  - Basic error handling & logging

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Week 7: Data Processing / Automation Logic

- **Tasks:**
  - Focus on the data-heavy portion (ETL or AI logic)
  - Debug and clean pipelines
- **Deliverables:**
  - Tested data pipeline or automation logic
  - Documented process steps
- **Focus:**
  - Python Pandas, NumPy, SQLite
  - n8n: webhook + cron + processing chain

Week 8: Testing & Validation

- **Tasks:**
  - Write system/integration tests
  - Conduct UAT simulation
- **Deliverables:**
  - Test case suite (manual or automated)
  - Bug reports and fixes
- **Focus:**
  - QA practices
  - Continuous testing
  - Peer feedback

Week 9: Documentation & Feedback

- **Tasks:**
  - Create user guide, architecture notes
  - Conduct peer review & iteration
- **Deliverables:**
  - Project report (Google Doc or Notion)
  - Presentation deck draft
- **Focus:**
  - Writing for technical audiences
  - Review loop with mentors

Week 10: Polish & Final Build

- **Tasks:**
  - Code refactoring
  - Add security/error handling
- **Deliverables:**
  - Final working solution
  - Project folder with all assets
- **Focus:**
  - Deployment checklist
  - Optional: Deploy on Heroku, Streamlit, or render

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📍 Weeks 11–12: Showcase & Career Prep

Week 11: Presentation & Social Publishing

- **Tasks:**
  - Record demo videos
  - Write a LinkedIn post or blog article
- **Deliverables:**
  - YouTube/LinkedIn-ready demo
  - Slide deck + portfolio entry
- **Focus:**
  - Tech storytelling
  - Brand building
  - Example: “How I automated my college’s assignment reminder system using Gen AI + n8n”

Week 12: Mock Interviews & Exit Review

- **Tasks:**
  - Mock interviews with peers/mentors
  - Feedback session & resume review
- **Deliverables:**
  - Interview performance checklist
  - Resume with updated project
- **Focus:**
  - Career readiness
  - Reflective learning