Case Study

Streamlining Worksheet Development with AI-Driven Automation for Efficient Multi-Domain Authoring

Magic EdTech

The Client

The client, a leading U.S. K–12 edtech company, creates adaptive, research-informed curricula that support students and educators. Their solutions blend innovative tech with instructional best practices for high-quality, standards-aligned content that fosters academic growth.

The Challenge

The client aimed to cut costs and time-to-market required for authoring student handouts/worksheets, , essential for engagement and comprehension during lessons. Designed to guide students through key concepts and support educators in scaffolding instruction, these worksheets were available as printable PDFs and digital versions but were traditionally slow and costly to develop.

Critical Success Parameters

✔ Develop a plan to generate the worksheet content in an automated fashion, based on the existing lesson content.

✔ Establish an intuitive dialectic between a human subject matter expert and the automated output for the handouts, ensuring the generated content is accurate and optimized for student use.

✔ Materially reduce the time and unit cost needed to author the worksheets and create a seamless workflow: *lesson inputs -> automated authoring -> human editing -> finalization -> production.*

Our Approach

✔ Magic developed the following automated workflow, saving time, effort, and investment:

1. **Input Documents:** PPT/DOCX files were received as source materials.
2. **Content Extraction:** Text & visuals were extracted to JSON for structured data handling.
3. **AI Transformation:** The extracted content was transformed into fill-in-the-blanks using AI.
4. **Draft Preparation:** A Word document was automatically generated from the AI-transformed content.
5. **SME Review:** Subject matter experts manually reviewed and edited the AI-generated content to ensure accuracy.
6. **Content Finalization:** Reviewed content was updated and re-exported to JSON for consistency.
7. **InDesign Ingestion:** The finalized content was ingested into an InDesign template for final production.

Key Result Highlights

200 worksheets authored using new automated workflow.

50% savings on cost.

Reduced development time by **50%**.