

Transforming K-12 Education Services through Secure, Offline AI with Intel Core Ultra and AirgapAI



Executive Summary

Challenge: A large county Department of Education needed to empower therapy services staff with AI-assisted documentation while ensuring 100% compliance with FERPA and HIPAA regulations—without exposing sensitive student and patient data to external cloud services.

Solution: Intel and Iternal Technologies deployed AirgapAI™ on Intel Core Ultra AI PCs, enabling therapists and administrative staff to generate professional, audit-ready documentation entirely offline using 2,800+ pre-configured Quick Start Workflows.

Results:

- 78x improvement in AI accuracy vs. traditional RAG pipelines through Blockify® data optimization
- Up to 4.9x faster inference and 112x faster first-token latency with Intel OpenVINO optimization
- 100% offline operation ensuring FERPA and HIPAA compliance
- 75% reduction in documentation time while improving consistency and terminology standardization
- Significant cost savings vs. cloud-based alternatives like Microsoft Copilot

Technology Stack: Intel Core Ultra (Lunar Lake AI PC) + OpenVINO | AirgapAI + Blockify + Quick Start Workflows

The Challenge: AI-Powered Documentation Without Compromising Student Privacy

AI is rapidly becoming a strategic asset for K-12 education organizations. To deliver exceptional therapy services and maintain regulatory compliance, education professionals must access the right information, at the right time, in a safe, secure, and trusted manner—while being absolutely certain every insight is factually correct and compliant with FERPA and HIPAA requirements.

The County Department of Education serves school districts across one of the largest metropolitan areas in the United States, providing specialized therapy services to students through a dedicated team of therapists who operate across multiple districts. These professionals require AI assistance to:

- Generate consistent, professionally formatted therapy documentation
- Ensure standardized terminology across therapists with varying experience levels
- Create audit-ready reports that meet board-approved documentation standards
- Protect sensitive student health information from external exposure

The organization had evaluated Microsoft Copilot and other cloud-based AI solutions, but the costs proved prohibitive for district-wide deployment—and more importantly, sending student therapy records to external data centers introduced unacceptable compliance risks.

"We're trying to embrace AI in a more careful manner," noted the department's IT Operations leadership. *"With schools and student information, security is critical. That's*

where AirgapAI comes into play—the information stays inside. It doesn't go outside to the internet."

Together, Intel and Iternal Technologies have partnered to provide a unique solution that addresses the County Department of Education's needs through AirgapAI, transforming how therapy services professionals create documentation while maintaining absolute data privacy.

Benchmark Results

The County Department of Education evaluated AirgapAI on Intel Core Ultra AI PCs, testing the solution against their documentation requirements for therapy services.

Intel Core Ultra with OpenVINO Optimization

Leveraging Intel Core Ultra processors with OpenVINO optimization, AirgapAI delivers:

- **Up to 4.9x faster inference speed** compared to generic implementations
- **Up to 112x faster first-token latency** for immediate responsiveness
- **Up to 9.2x higher ingestion throughput** for processing reference materials

Processing Performance:

- Words per second: 2 words/second for complex generation tasks
- Monthly capacity: 4,860 pages of documentation per AI PC
- Real-time response: Sub-second initial response for interactive queries

Accuracy Improvements: Beyond speed, Blockify's approach increased the precision of vector searches and RAG models, virtually eliminating hallucinations and improving LLM accuracy by approximately 78x (7,800 percent) compared with a traditional RAG pipeline.

The OpenVINO optimization enables a "Better and Best" dynamic: the Intel NPU delivers efficient, high-performance processing for sustained documentation workloads while preserving battery life, while the integrated GPU provides maximum burst performance for demanding tasks.

Why AI Matters for Education Services



This isn't simply about answering questions faster. Therapy services documentation requires:

- **Consistent terminology** across all therapists—whether they have 2 years or 30 years of experience
- **Board-approved formatting** that meets audit requirements
- **FERPA-compliant handling** of student educational records
- **HIPAA-compliant protection** of student health information
- **Real-time accessibility** for therapists working across multiple school districts

Traditional Documentation Challenges

- Manual document creation averaging 30-45 minutes per therapy report
- Inconsistent terminology and formatting across different therapists
- Risk of compliance violations when using cloud-based AI tools
- Limited access to approved templates and reference materials in the field
- Training burden for new therapists on documentation standards

Without an effective approach to content lifecycle, the Department risks relying on an AI that will never be fully accurate. It's a case of garbage in, garbage out—and if you can't trust your AI to continually be correct, you can't trust it at all because the mistakes are unpredictable.

Solution Summary

Blockify® Data Ingestion with Intel Core Ultra

Blockify is Iternal's patented data ingestion and optimization system that improves AI accuracy by up to 78x (7,800%). Through a three-pronged approach of ingestion, distillation, and taxonomy creation, Blockify transforms the Department's approved policies, templates, and documentation standards into a single source of truth—distilled to just 2.5% of original size while virtually eliminating AI hallucinations.

For the Department of Education, Blockify processes:

- Board-approved documentation templates
- Therapy terminology standards
- Compliance guidelines and regulatory requirements
- Best practice documentation from experienced therapists

AirgapAI™ Edge Inference with Intel NPU + OpenVINO

AirgapAI is a powerful, network-independent AI solution designed to run 100% locally on Intel-equipped AI PCs. By operating completely offline, AirgapAI upholds stringent data-protection standards—no external connection is required, minimizing potential vulnerabilities and ensuring sensitive student and patient information never leaves the organization's control.

"All the other chat applications out there are tracking all that information," the Department's IT leadership observed. "Even though they say they're not saving it, they really are because it's going into a data center. And who knows where that data center is. AirgapAI was created for the DOD—it's already isolated from the internet. That's what makes it more secure and more interesting for us because it's about protecting that HIPAA and FERPA information."

Technical Workflow

The Blockify Workflow Steps Included:

1. **Chunking the Text:** Board-approved documentation, therapy templates, and compliance guidelines divided into smaller content chunks based on a proprietary algorithm. Chunks passed into specially configured LLM, outputting modular blocks with robust taxonomy for reuse.

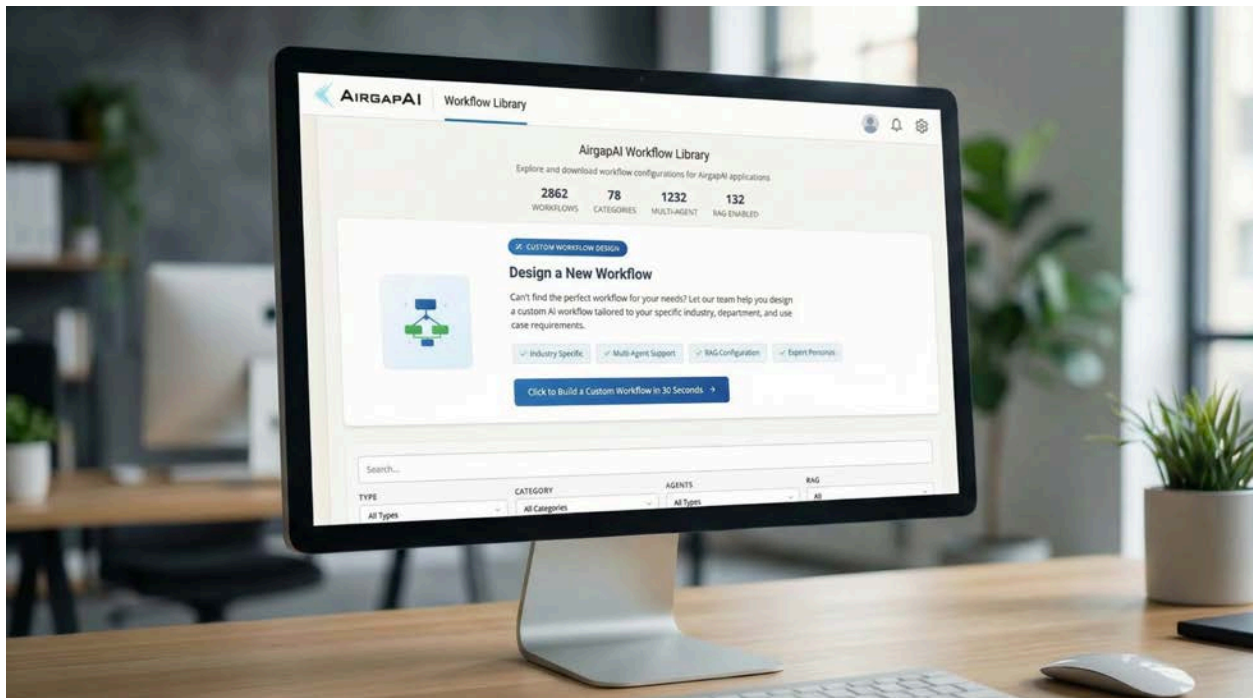
2. **Embeddings:** Content blocks converted into embeddings (vector representations) capturing unique context and structure—including therapy terminology, regulatory requirements, and documentation standards—enabling content-aware retrieval within AirgapAI.
3. **Retrieval and Response Generation:** Based on therapist queries, the system retrieves relevant content from the Context-Aware Retrieval Database for accurate, contextually relevant responses that align with the Department's approved documentation standards.

Business Use Cases

The County Department of Education identified multiple applications for AirgapAI across their organization:

- **Therapy Session Documentation:** Generate consistent, professionally formatted session notes that adhere to approved terminology and compliance requirements—reducing documentation time by 75% while improving quality and consistency.
- **Treatment Plan Development:** Create individualized treatment plans using approved templates and best practices, ensuring all plans meet regulatory standards and audit requirements.
- **Progress Report Generation:** Produce standardized progress reports for students, families, and school districts, maintaining consistent formatting and professional language across all therapists.
- **Compliance Verification:** Instantly query FERPA, HIPAA, and board-approved guidelines to verify documentation meets all regulatory requirements before submission.
- **New Therapist Onboarding:** Accelerate training for new therapy staff by providing AI-assisted access to approved procedures, terminology standards, and documentation templates.
- **Multi-District Coordination:** Enable therapists serving multiple school districts to quickly adapt documentation to each district's specific requirements while maintaining overall Department standards.

Immediate Productivity with 2,800+ Quick Start Workflows



AirgapAI's technology is enhanced with more than 2,800 pre-configured Quick Start Workflows—enabling non-technical users across 76+ industry verticals and job roles to achieve immediate productivity gains without a learning curve.

For K-12 education specifically, AirgapAI includes 30+ pre-built workflows:

- Behavior plan development
- Class newsletter creation
- Conference preparation
- Family engagement planning
- Grant writing assistance
- Field trip planning

Custom Workflow Generation: The Department can describe their specific documentation needs in natural language, and AirgapAI automatically creates custom workflows tailored to their therapy services requirements—no technical expertise required.

"They could probably even use the workflow generator to help them create a specific workflow design for their division," noted IT leadership, recognizing the potential for department-specific automation.

Maximizing AI Investment with The AI Strategy Blueprint

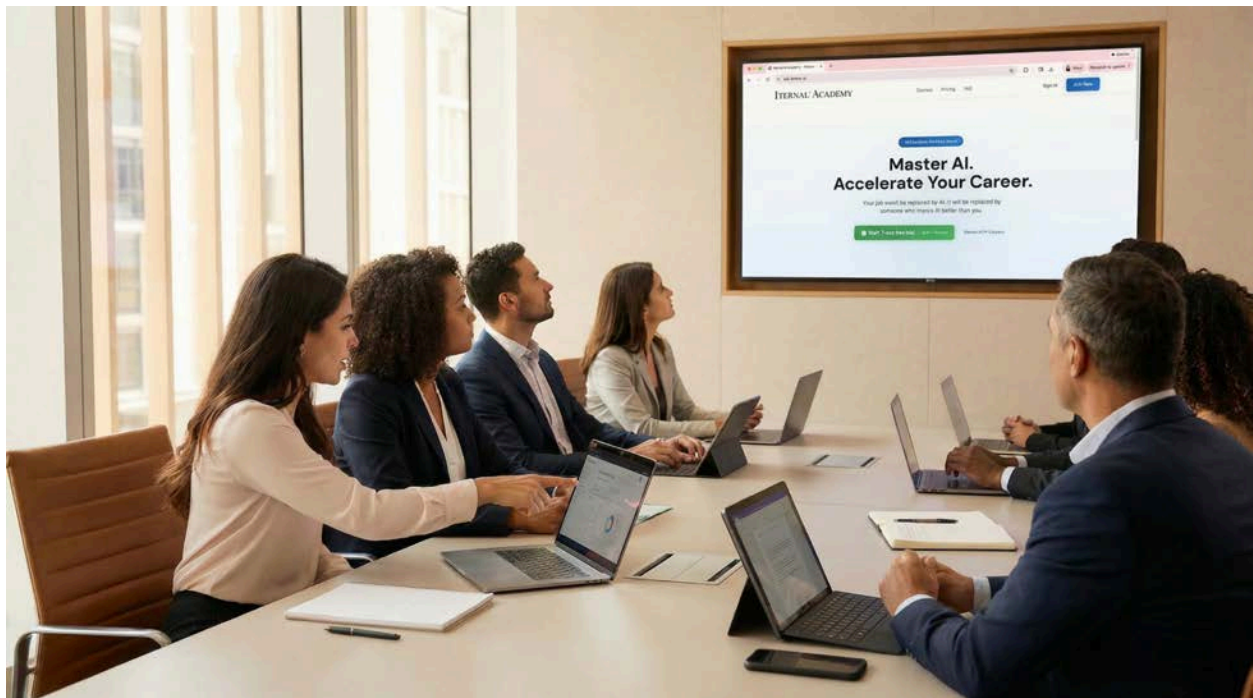
Technology alone doesn't guarantee AI success—85% of enterprise AI investments fail to deliver expected results. Iternal enhances its technology deployment with *The AI Strategy Blueprint*, a complete framework for AI transformation written by Iternal's CEO based on seven years of enterprise deployment experience.

The Blueprint addresses the 70% of AI success that depends on people and processes:

- **5x revenue gains** compared to competitors stuck in pilot programs
- **Governance frameworks** that enable speed rather than create barriers
- **Crawl-walk-run deployment strategies** that prove value before scaling risk
- **ROI quantification methodologies** that satisfy taxpayer scrutiny

This strategic foundation ensures the County Department of Education extracts maximum value from their AirgapAI deployment rather than joining the majority of failed AI initiatives.

Accelerating Adoption with Iternal AI Academy



The fastest path to AI ROI is workforce capability. Iternal enhances its technology with the AI Academy (edu.italernal.ai)—comprehensive AI fluency training that accelerates how quickly employees can leverage AirgapAI:

- **610+ courses** spanning every major industry and job role, including K-12 education
- **Three proficiency tiers** - Beginner, Advanced, and Expert tracks
- **Real-time AI feedback** - Prompts scored and critiqued for immediate improvement
- **Verified certificates** - Independently verifiable credentials demonstrating competency
- **Universal application** - Skills transfer to any AI platform

"There is a big group of people who work for the Department that are interested in even more advanced AI classes," noted IT leadership. "The Academy would be something good for them because they see AI is coming and they're trying to embrace it."

The Department already conducts internal AI training, but the AI Academy provides structured, accredited coursework that builds on existing efforts—ensuring staff at all levels can fully leverage their AirgapAI investment.

Cost-Effective AI for Taxpayer Accountability



As a publicly funded organization, the County Department of Education maintains strict accountability for technology investments. AirgapAI delivers enterprise AI capabilities at a fraction of cloud-based alternatives:

- **100% on-premise operation** - No per-user cloud subscription fees
- **Leverage new AI PC hardware investments** - The Department's planned device refresh includes Intel Core Ultra AI PCs
- **Predictable costs** - No usage-based pricing surprises
- **Dramatically lower per-seat cost** vs. Microsoft Copilot

"We could have gone Microsoft Copilot and spent a ton of money," noted the Department. "We already looked at Copilot—that was one of the first ones we evaluated. The cost is just not something we could afford to continue for the larger number of users."

This cost-conscious approach demonstrates responsible stewardship of taxpayer funds while still providing staff with cutting-edge AI capabilities.

What This Means for You: Scalable AI Inference for Future Growth

By uniting Intel Core Ultra with OpenVINO optimization—delivering up to 4.9x faster inference and 112x faster first-token latency—and Iternal Technologies' AirgapAI and Blockify, K-12 education organizations can harness AI at the edge, turning years of documentation standards and approved procedures into actionable assistance without ever exposing sensitive student information to third-party clouds.

Together, Intel and Iternal Help Education Organizations:

- **Automate Documentation:** Process therapy notes, treatment plans, and progress reports while ensuring consistency with Blockify's 78x accuracy improvement
- **Ensure Compliance:** Every generated document respects FERPA, HIPAA, and board-approved requirements
- **Accelerate Decision-Making:** Surface trusted answers in seconds with OpenVINO-optimized inference
- **Protect Student Data:** Keep all information within organizational boundaries with 100% offline operation

Enhancing Technology with Complete AI Enablement:

- **Maximize Investment:** The AI Strategy Blueprint ensures your deployment succeeds where 85% of AI initiatives fail

- **Accelerate Adoption:** AI Academy training builds workforce capability for faster time-to-value
- **Immediate Productivity:** 2,800+ Quick Start Workflows—including 30+ for K-12 education—eliminate the learning curve

AI has moved from conceptual to operational in education. Whether generating therapy documentation, ensuring regulatory compliance, or standardizing processes across districts, Intel and Iternal deliver the secure, accurate, and scalable framework education organizations need to serve students while protecting their privacy.