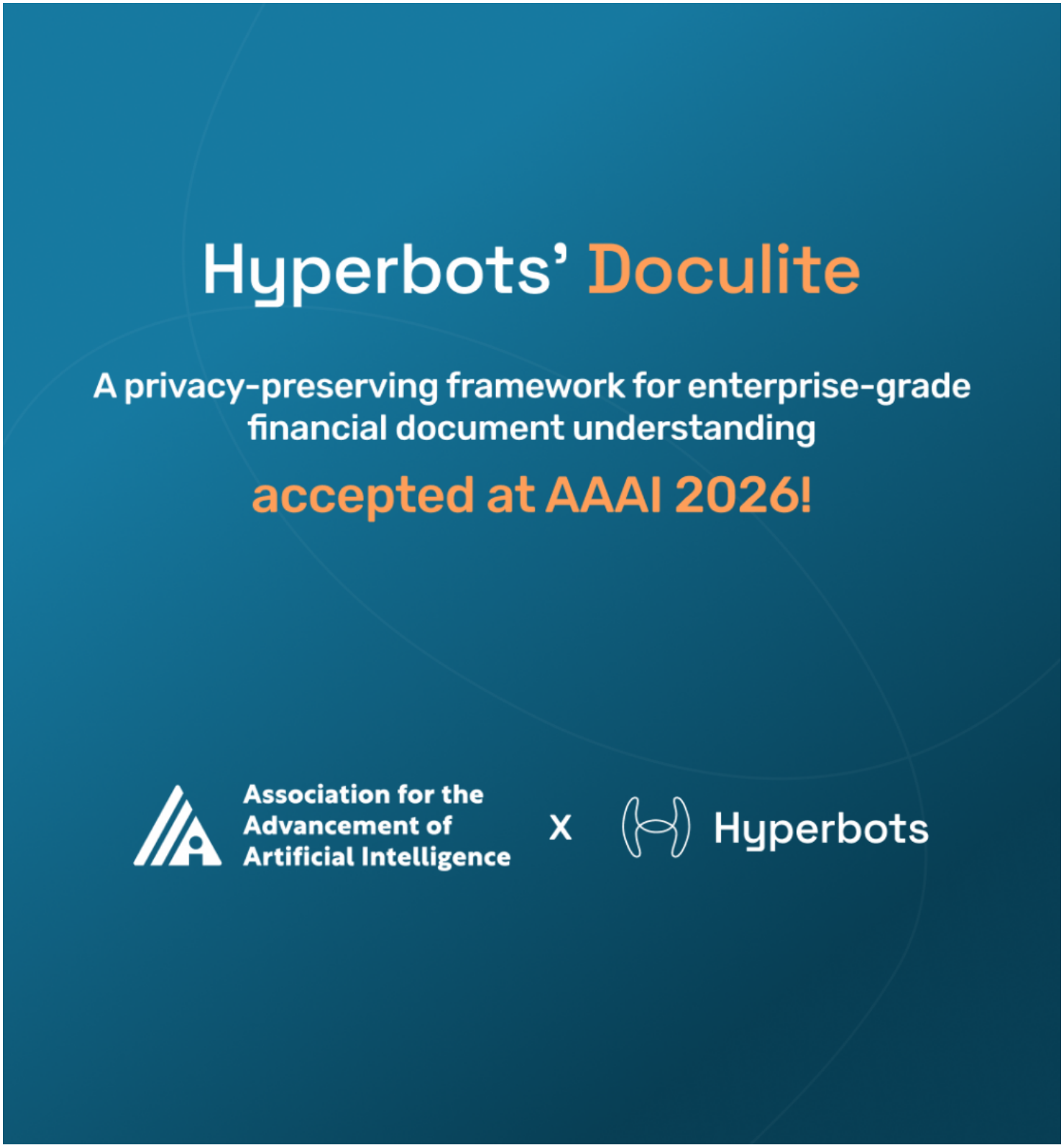
Hyperbots Inc Publishes Breakthrough Research on Privacy-Preserving Financial Document Processing AI

Hyperbots' DocuLite enables enterprise-grade financial document understanding without manual annotation or data exposure



New York City, New York Dec 24, 2025 (Issuewire.com) - Hyperbots Inc., a leading Agentic AI

platform for Finance & Accounting, today announced the publication of its new research paper, "**Breaking the Annotation Barrier with DocuLite: A Scalable and Privacy-Preserving Framework for Financial Document Understanding.**" accepted at the AAAI 2026 Workshop (aaai.org/conference/aaai/aaai-26/workshops-program/) on Deployable AI - one of the world's most recognized AI conference, the paper introduces DocuLite - an enterprise-ready framework that enables high-accuracy financial document understanding without relying on large volumes of human-annotated data or exposing sensitive customer information

Financial institutions and enterprises process millions of invoices and other visually rich documents each year, yet training reliable document AI systems remains constrained by two fundamental challenges: the high cost of manual annotation and strict data privacy requirements. DocuLite addresses both by combining structure-aware synthetic data generation with domain-specific learning strategies tailored for real-world financial documents.

DocuLite consists of two complementary components designed to adapt both Large Language Models (LLMs) and Vision-Language Models (VLMs) to complex invoice extraction tasks. **InvoicePy** generates privacy-preserving synthetic OCR data that preserves the structure and layout of real invoices while obfuscating sensitive content, enabling LLMs to be trained on realistic financial documents without data leakage. **TemplatePy** uses layout-agnostic, HTML-based templates to train VLMs on key-value reasoning across diverse invoice formats, eliminating dependence on proprietary invoice images.

In experimental evaluations on a deliberately curated Challenging Invoice Extraction Dataset of real-world invoices, models trained using DocuLite-generated data significantly outperformed identical models trained on publicly available datasets. A 7B-parameter LLM trained with InvoicePy achieved an absolute improvement of 0.525 F1 score, while an 8B-parameter VLM trained with TemplatePy achieved a 0.513 F1 score improvement, demonstrating that smaller, deployable models can reach enterprise-grade performance through better data strategy rather than increased model size.

"Manual annotation and data privacy have long been the hidden constraints on scaling financial document AI," said Niyati Chhaya, Co-Founder & VP AI at Hyperbots Inc. "DocuLite reflects how we build AI at Hyperbots - privacy-first, grounded in real production challenges, and engineered to deliver accuracy at scale. This research shows that with the right framework, enterprises don't need to trade off privacy, cost, or performance."
The research builds on Hyperbots' broader investment in proprietary AI systems for finance and accounting. The principles behind DocuLite underpin Hyperbots' finance-specific AI architecture, which powers its suite of AI Co-Pilots for invoice processing, accruals, vendor management, procurement, payments, tax verification, cash reconciliation, collections, forecasting, and reporting. Customers using Hyperbots have reported productivity gains of up to 80%, driven by the platform's ability to understand and act on complex financial data with minimal human intervention.

By publishing DocuLite, Hyperbots reinforces its commitment to advancing the state of enterprise AI through original research that directly informs production-grade systems. The company's AI team holds over 50 patents across artificial intelligence, document understanding, and enterprise software, and continues to focus on building scalable, secure, and autonomous finance operations.

Full Research Paper:
https://www.hyperbots.com/research/breaking-the-annotation-barrier-with-doculite

About Hyperbots Inc.
Hyperbots Inc. transforms Finance & Accounting operations using proprietary AI agents that

autonomously read, reconcile, validate, and post financial data across complex workflows. Its specialized AI Co-Pilots operate on a finance-specific foundational architecture delivering intelligence across language, vision, reasoning, interpretation, recommendation, prediction, redaction, and exception handling. Hyperbots integrates seamlessly with major ERPs and upholds ISO 27001, SOC 1 Type 2, and SOC 2 Type 2 certifications. The company raised $9 million in venture funding during 2024–25.

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Request a Demo: https://www.hyperbots.com/request-demo

About the AAAI 2026 Workshop
The AAAI 2026 Workshop is part of the annual conference organized by the Association for the Advancement of Artificial Intelligence (AAAI), a leading global scientific society advancing artificial intelligence research and practice. AAAI workshops are peer-reviewed forums that showcase emerging and applied AI research, with a strong focus on real-world deployment, scalability, and responsible innovation.

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Source : Hyperbots