

Fast Accounting AI Innovation Brief

Unlocking Business Value Through Proprietary Document Intelligence

An Executive Technical Summary for IT and Finance Leaders

Fast Accounting is pioneering a smarter future for financial document automation. Our proprietary AI research spans eight advanced projects developed by our Chief AI Architect. These innovations power a next-gen platform designed to read, understand, and structure complex business documents—across languages, layouts, and real-world noise like stamps, handwriting, and curved text.

Unlike generic OCR, or off-the-shelf AI, our models are developed for real-world finance: vendor invoices, receipts, tax forms, and compliance documents that arrive messy, multilingual, and business-critical.

But Fast Accounting is not merely an automation provider; we are an AI research-driven company. Our solutions are built upon exclusive research presented at esteemed global AI conferences and published through Cornell University's arXiv library. This document summarizes eight recent breakthroughs, translating technical advancements into real-world business impacts.

What sets us apart?

- **Higher accuracy** on messy, scanned, or multilingual documents
- **Broader coverage** tables, text, logos, layouts—all in one platform • **Faster automation** without needing constant fine-tuning or manual retraining

Our tech outperforms Google Vision, LayoutLM, and other industry leaders on key benchmarks. Below is a summary of our core innovations and the business value they deliver.

Proprietary AI Innovations

<p>Research Title </p> <p>A3S: Adversarial</p>	<p>Learning for Scene Text Spotting</p>	<p>DiffusionSTR: Diffusion Model for</p>	<p>Scene Text Recognition</p> <p>DTrOCR:</p>	<p>Decoder-only Transformer for OCR</p>
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<p>RL-LOGO: Reinforcement Learning for Logo Recognition</p>	<p>image-to-text</p> <p>Applies deep RL to locate logos without needing annotated bounding boxes</p> <p>Fuses layout-aware encoders with LLMs trained via instruction tuning</p>	<p>or vendors in financial documents and scanned receipts</p> <p>One model handles classification, QA, and information extraction—great for cost and speed</p>	<p>New state-of-the-art across FUNSD, CORD, RVL-CDIP, and DocVQA</p> <p>+1.3% gain over already top-performing DTrOCR model</p>	<p>IntelliSys 2024</p> <p>JaPOC: Japanese Post-OCR Correction Benchmark</p>
<p>LayoutLLM: Large Language Model for Document Understanding</p>	<p>Adds a correctness-checking head that helps the model</p>	<p>Reduces misrecognition on hard-to-read text, improving</p> <p>Outcome</p>	<p>ICASSP 2023</p>	<p>NTCIR UFO: Table & Text Linking in Financial Reports</p>
<p>JSTR: Judgment Improves Scene Text Recognition Innovation</p> <p></p>	<p>Business Value</p> <p>Boosts accuracy on natural scene text (e.g., receipts, storefronts, signs) even with curved or stylized fonts</p>	<p>+6.9% accuracy over ABCNet baseline; reduced OCR error rates in real-world documents</p>	<p>ICIP 2023</p>	<p>learn from its mistakes</p>
<p>Introduces semantic-aware text recognition using adversarial learning</p>	<p>Recovers text from poor scans, distortion, or glare—ideal for legacy or mobile-captured documents</p>	<p>Competes with state-of-the-art while using a simpler, more adaptable model</p>	<p>WACV 2024</p>	<p>Introduces the first benchmark for fixing OCR errors in Japanese financial documents using T5</p>
<p>Uses diffusion models to iteratively refine text recognition</p>	<p>Lightweight, accurate OCR across formats and languages—great for scale and edge devices</p>	<p>Outperforms most prior OCR models across multiple benchmarks</p>	<p>ICASSP 2024</p>	<p>Uses ELECTRA-based NLP + rule-based correction for table cell classification and linking</p>
<p>Eliminates complex encoder-decoder architectures, using only a decoder (like GPT) for</p>	<p>Automatically identifies brands</p>	<p>+18 points accuracy vs traditional CNNs on Logo-2K+ dataset</p>	<p>LREC/COLING 2024</p>	<p>audit-grade confidence</p> <p>Solves a key problem in Japan/APAC markets: OCR errors from</p>

stamps or seals
on vouchers

NTCIR-17
competition

NTCIR 2017

Automates structured data extraction from complex financial tables, even in HTML or PDF	Boosts Vision API performance from 42.6% → 72% accuracy with our post-OCR correction 93.4% accuracy, 2nd place globally in	PRICAI 2024
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Built for the Future of Finance

These research contributions are not just academic; they power the tools that automate the most challenging aspects of accounting today and are extensible into future needs like real-time financial reporting and global compliance. Fast Accounting's platform is grounded in field-tested, research-driven AI—trusted by top enterprises around the global stage.

Strategic Benefits

- **Automate messy, multilingual workflows** with confidence
- **Extract structured data** from tables, receipts, vouchers, and scanned documents •
- **Outperform legacy OCR tools** with less human intervention
- **Ready for enterprise deployment** across ERP, accounts payable, and financial audit pipelines

For further details or to schedule a demonstration, [please contact our team](#).