Leveraging AI for Credit, Collections & Risk Management

Finding Efficiencies with ChatGPT & AI Platforms

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Agenda

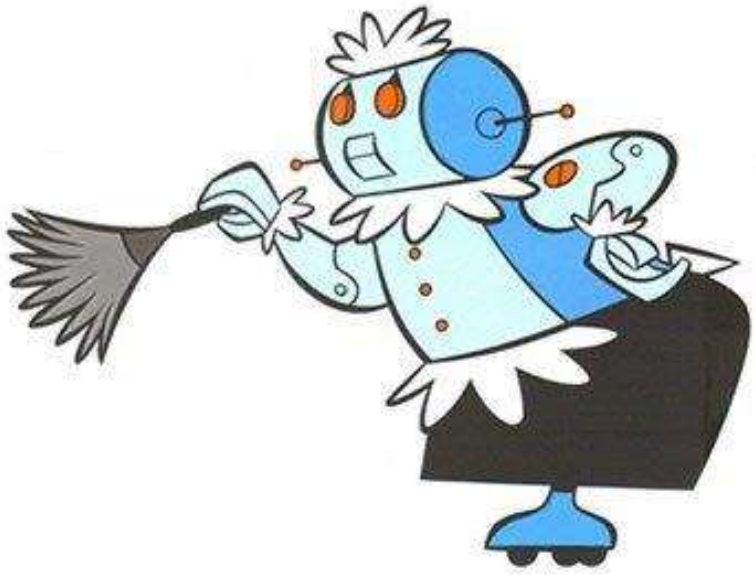
- What is AI
- Business Challenges
- AI in Credit Management
- AI in Collections
- AI in Risk Management
- Free A.I.
- RAGS
- Implementation Roadmap
- Risks & Considerations
- Future Vision

Phase 1: Quick Wins

Phase 2: Expansion

Phase 3: Full Integration

What is A.I.?

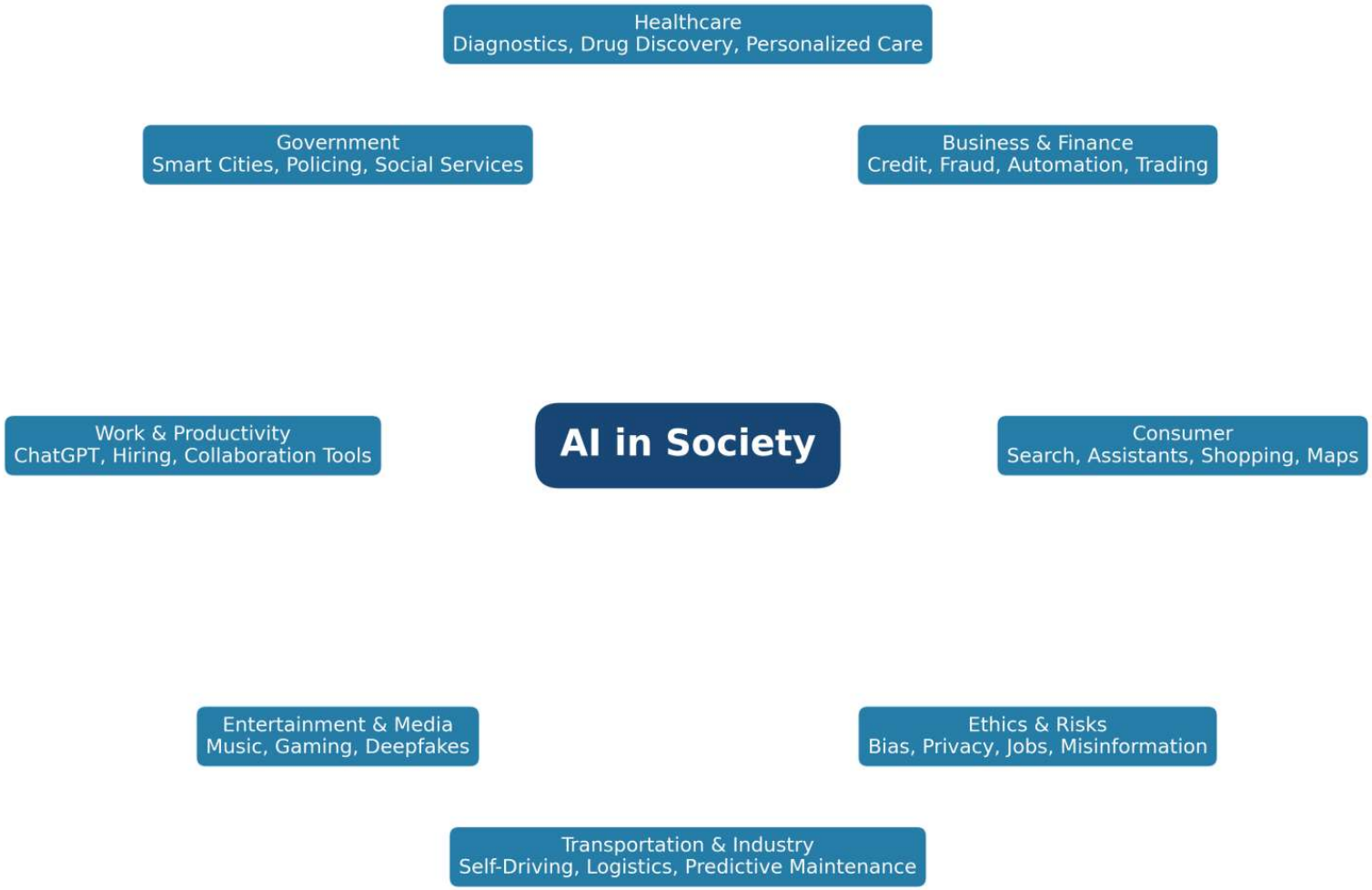


A.I. in Society

Consumer Uses

- **Search & Recommendations**
  - Google search ranking, YouTube recommendations, Netflix "Because you watched…" — all powered by machine learning.
- **Personal Assistants**
  - Siri, Alexa, Google Assistant use natural language processing (NLP) to understand and respond.
- **Shopping & Ads**
  - Amazon suggests products based on prior behavior.
  - Social media platforms (Facebook, Instagram, TikTok) personalize feeds and ads with AI.
- **Navigation & Mobility**
  - Google Maps uses AI for traffic predictions.
  - Ride-hailing apps (Uber, Lyft) optimize matching drivers with riders.

AI in Society – Overview



NACM

Business Challenges

• Rising complexity in credit & collections due to economic volatility

• Manual processes are slow, subjective, and costly

• Collections teams bogged down in repetitive work

• Risk managers struggle with data overload and compliance demands

→ AI presents an opportunity to enhance speed, accuracy, and predictability

AI in Credit Management

Credit Scoring Enhancements

- Beyond FICO: use alternative data (transaction histories, behavioral data, even macroeconomic indicators).
- ML-driven risk scores can update dynamically, not just at origination.

Automated Underwriting

- Faster approvals, lower operational costs, reduced bias if designed carefully.

Customer Segmentation

- Group borrowers into more precise risk buckets.
- Tailor credit limits, interest rates, and monitoring.

AI in Collections

Predictive Collection Models

- Anticipate which customers are likely to default or delay.
- Prioritize high-risk accounts.

Personalized Collection Strategies

- Tailor outreach based on communication preferences and payment behavior.
- AI-driven decisioning: when to send reminders, what tone/message works best.

Conversational AI / Chatbots

- 24/7 engagement with delinquent customers.
- Automate routine interactions, escalate only complex cases.

AI in Risk Management

Early Warning Systems	• Detect signals of distress (spending pattern changes, negative cash flows, industry downturns).
Portfolio Stress Testing	• Simulate economic scenarios quickly. • AI models identify hidden correlations and systemic risks.
Fraud Detection	• Real-time anomaly detection using unsupervised learning.

Copilot

1. **Document & Content Creation**
   - **Drafting proposals, reports, and policies** from bullet points or raw notes.
   - **Summarizing long documents** (contracts, compliance policies, meeting notes).
   - **Translating or simplifying language** for different audiences (technical → customer-friendly).
2. **Email & Communication**
   - **Generate email replies** in Outlook based on context and prior threads.
   - **Summarize long email chains** so busy staff don't need to read everything.
   - **Draft personalized outreach** for collections, customer reminders, or vendor updates.
3. **Excel & Data Analysis**
   - **Auto-generate formulas and pivot tables** just by describing what you want.
   - **Summarize trends** from financial data (e.g., overdue accounts, risk scores).
   - **Forecasting**: Copilot can suggest projections from historical data.
4. **Teams & Meetings**
   - **Meeting summaries**: Action items, decisions, unresolved issues auto-extracted from Teams meetings.
   - **Real-time Q&A**: Ask Copilot "What was decided about credit terms in yesterday's call?" instead of reviewing recordings.
   - **Follow-up automation**: Copilot can draft post-meeting recap emails automatically.

Gemeni

1. Knowledge Work & Communication

- **Smart document drafting**: Use Gemini in Google Docs to generate reports, summaries, or policy drafts from rough notes.
- **Email efficiency**: In Gmail, Gemini can draft replies, summarize threads, and adjust tone (formal → casual).
- **Instant translation & simplification**: Convert technical documents into plain-language summaries for customers or internal staff.

2. Data & Analysis

- **Google Sheets automation**: Ask Gemini to build formulas, create pivot tables, or summarize trends.
- **Insights from unstructured data**: Upload CSVs or logs → Gemini extracts insights (e.g., overdue invoices by region, risk outliers).
- **Forecasting & scenario modeling**: Predict revenue or collection outcomes based on historical trends.

3. Customer & Collections Workflows

- **Personalized outreach**: Draft customer collection emails in different tones, based on account status.
- **Automated summaries**: Gemini can summarize client communications (emails + docs) into collector briefing notes.
- **Chatbots with Gemini**: Build customer-facing bots that negotiate payment terms, answer FAQs, or provide policy details.

ChatGPT

1. Communication & Writing

- **Drafting**: Quickly generate emails, memos, proposals, or policy updates.
- **Summarizing**: Condense long reports, contracts, or meeting transcripts into key points.
- **Tone adjustment**: Rewrite content for different audiences (professional, persuasive, simplified).
- **Translation**: Convert documents into other languages instantly.

2. Research & Knowledge Management

- **Quick answers**: Get instant explanations of complex topics (laws, financial terms, industry standards).
- **Document Q&A**: Upload policies, manuals, or reports and ask targeted questions instead of reading line by line.
- **Competitive/market insights**: Generate summaries of industry trends from public information.
- **Knowledge base assistant**: Train ChatGPT with your internal docs (using Retrieval-Augmented Generation) to answer company-specific questions.

3. Customer Engagement & Collections

- **Drafting collection notices**: Vary tone (friendly reminder vs. firm warning).
- **Personalized responses**: Suggest custom replies based on customer's situation.
- **Chatbot integration**: Power self-service FAQs or payment-plan negotiations.
- **Interaction summaries**: Automatically condense call notes into collector action points.

Business Value & ROI

- Reduced default rates.
- Lower collections costs.
- Faster approvals → higher customer satisfaction.
- Stronger compliance (with explainable AI).
- Data-driven resilience during economic downturns.

Let's Talk RAG

- **RAG (Retrieval-Augmented Generation)** is one of the most practical and powerful approaches in modern AI. It's designed to make language models like ChatGPT **smarter, more accurate, and more grounded** by combining them with external knowledge.

- Traditional language models (LLMs) generate responses based only on what they were trained on. That training data has a cutoff, and it can be expensive to retrain.

- RAG adds a retrieval step: before generating a response, the system searches an external knowledge base (like a document store, database, or search index) and feeds the most relevant results into the model.

Let's Talk RAG

How It Works (Step by Step)

1.User Query

1. Example: *"What is EFCO's surcharge policy for credit cards?"*

2.Retrieval

1. A search system (e.g., vector database like Pinecone, Weaviate, or FAISS) looks up documents relevant to the query.
2. It uses embeddings (numerical representations of text) to find semantically similar content, not just keyword matches.

3.Augmentation

1. The retrieved passages (say, the latest company policy doc) are appended to the user's query.
2. Now the model has both the **question** and the **context**.

4.Generation

1. The LLM generates an answer, but it's grounded in the retrieved context, reducing hallucinations.

Let's Talk RAG

Example Workflow

Let’s say you run RAG for collections:

- **User:** *“Summarize the last three emails from customer ABC Corp about their overdue invoice.”*
- **Retriever**: Pulls the last 3 emails from your CRM/email system.
- **LLM**: Summarizes them into a single cohesive report.

Without retrieval, the model wouldn’t have access to those emails. With RAG, it does.

Let's Talk RAG

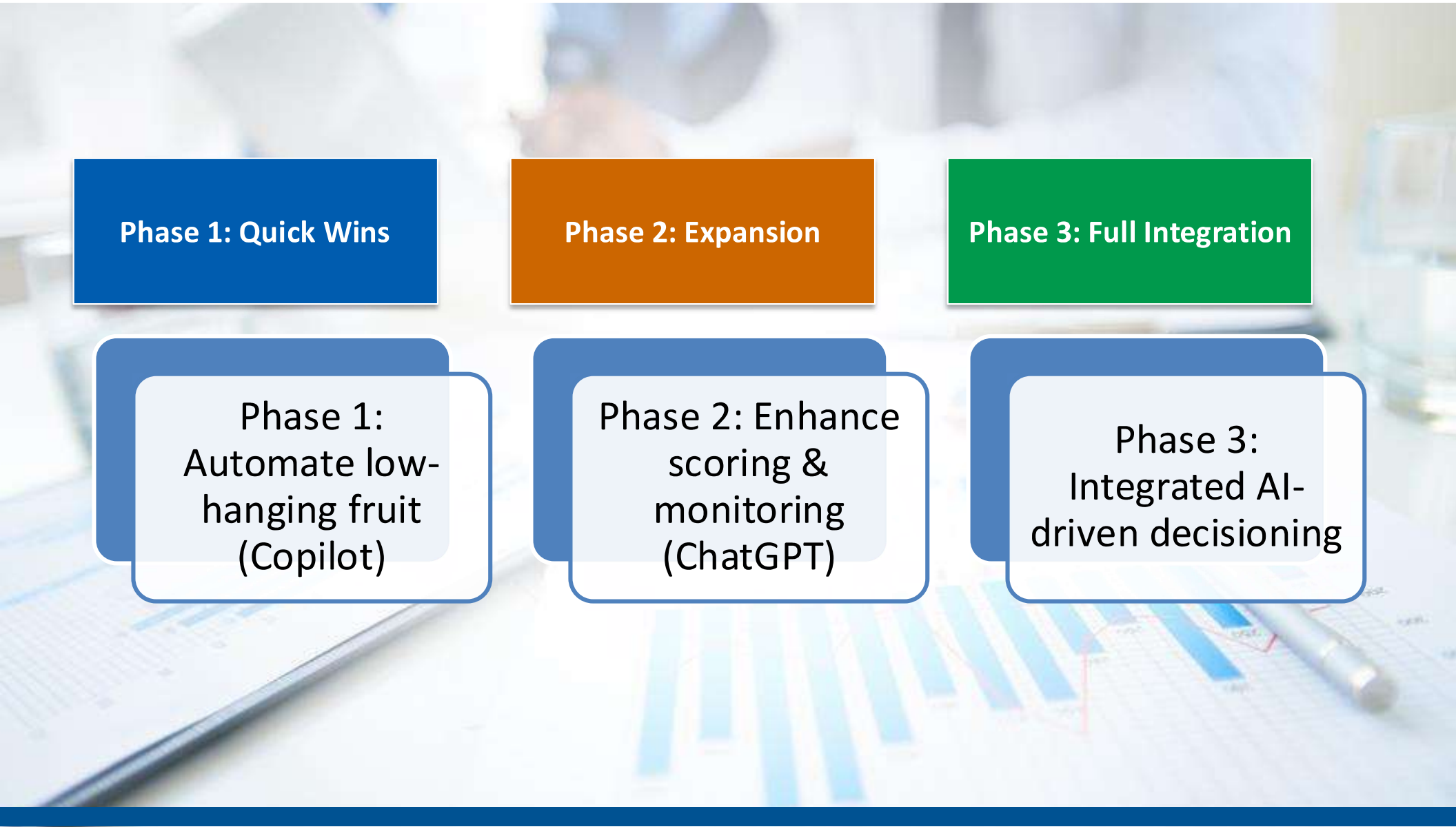
Benefits

- **Dynamic knowledge**: No need to retrain the model when data changes.
- **Private / secure context**: You can connect to internal documents safely.
- **Explainability**: Answers can include citations back to source documents.
- **Domain adaptation**: Tailors general-purpose AI to specialized domains (finance, law, Credit, etc.).

Key Challenges

•**Garbage in, garbage out**: If documents are poor quality or outdated, answers will be too.
•**Context window limits**: LLMs can only take in so much text; retrieval must be selective.
•**Latency**: Retrieval adds extra steps, so performance tuning matters.
•**Security & governance**: Careful control over what sources are indexed.

Implementation Roadmap



Risks & Considerations

- Model bias (fairness, explainability).
- Regulatory compliance (consumer credit laws, privacy).
- Data quality — AI is only as good as the inputs.
- Human oversight — AI augments, doesn’t replace, decision-making.

Future Vision

Reactive **Proactive** **Predictive**

- AI as a strategic co-pilot for credit & risk teams
- Transition from reactive → proactive → predictive management
- Build resilience, agility, and customer trust

→ Competitive advantage in an uncertain economy

My Challenge

1. **Play with the free versions**
   - (ChatGPT, Copilot, Gemeni, Etc).

2. **Identify pilot use cases**
   - (collections outreach, credit analysis).

3. **Engage your I.T. Team**

Questions?