



THE TRANSFORMATION:

How AI is enhancing analytics and optimizing decision-making

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Generative v. Analytical AI

GENERATIVE AI

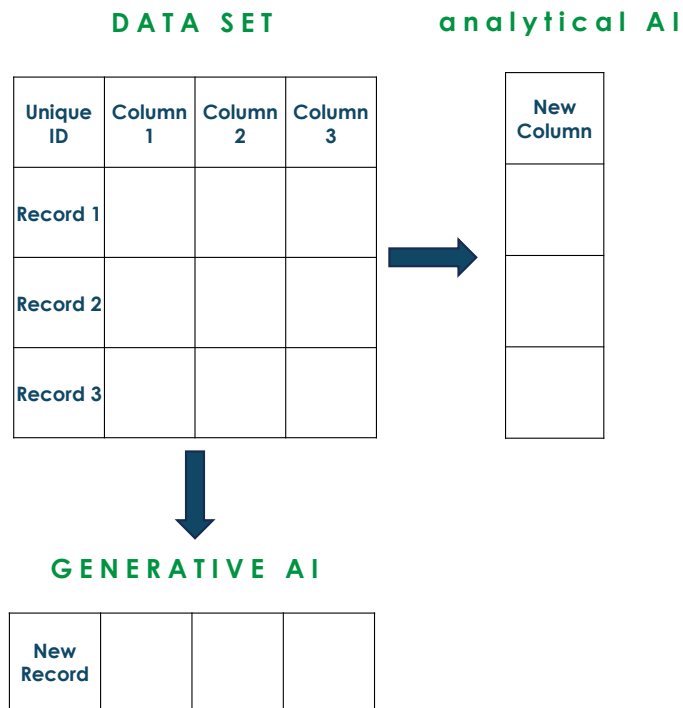
A form of artificial intelligence designed to generate new content, often in response to prompts. New content can be in the form of text, images, videos, and more.

ANALYTICAL AI

A subset of AI that uses machines to imitate human actions, analyze and classify large data sets, and make predictions.



Application to data



Analytical AI is generally classifying or describing existing data while generative AI is creating new records.



GENAI

Practical applications in our industry



*Document
summarization*



*Writing emails
and presentations*



Advanced Q&A



*Experience
personalization*



*Test data
generation*



*Automated
customer support*



AI

Practical applications in our industry



*Business
process
automation*



*Early
intervention*



*Text and image
classification*



Forecasting



*Quality
assurance*



*Data mining
and extraction*



Claims triage



*Dynamic
staffing*



Better ingredient(s) = better outcome(s)

“ENHANCED” MEDICAL NOTE {SOAP}

Mohammad Athar, M.D. 1/26/24

DCN:EB240130005462

Diagnosis codes: 1. M25.511 - Pain in right shoulder
 2. M25.512 - Pain in left shoulder
 3. E66.3 - Overweight
 4. S43.402A - Unspecified sprain of left shoulder joint, initial encounter
 5. M75.102 - Unspecified rotator cuff tear or rupture of left shoulder, not specified as traumatic
 6. S29.011A - Strain of muscle and tendon of front wall of thorax, initial encounter.

Subjective findings: Patient presents with left shoulder pain after slipping and falling on an icy driveway on 01/20/2024. He reports swelling and limited range of motion in the shoulder, with pain aggravated by lifting and certain arm movements. He is currently managing the pain with Tylenol and heating pads.

Objective Findings: Physical examination reveals tenderness and limited range of motion in the left shoulder. X-rays taken at the hospital showed no fractures. Neurological and musculoskeletal examinations were within normal limits.

Assessment: Suspected large rotator cuff tear and possible pectoralis muscle tear in the left shoulder.

Plan: Non-operative treatment plan includes physical therapy, acetaminophen for pain management, bracing/sling as needed, activity modification (no weight-bearing on the left arm), and an MRI of the left shoulder to confirm the diagnosis. Surgical intervention may be necessary depending on the MRI results. Follow-up appointment scheduled in 1-2 weeks.

EXAMINER ORIGINATED MEDICAL NOTE

1/30/24 – Dr. Levitz

RTW FD 1/31/24
 NOV 3/4/24
 DX lateral epicondylitis rt elbow





Quality assurance

Automation of the quality review process through tagging of elevated risk claims for review.

MANUAL QA

3 claims per examiner per month
~1% of open claims

AI REVIEW



Final results

Text classification models used to summarize quality review findings and automated results and report out to key stakeholders



Early intervention

CLINICAL INTERVENTION

Initiate clinical review on the highest risk and most complex claims upon initial receipt of medical.

RETURN TO WORK OUTCOMES

Early identification of restricted return to work with the goal of increasing opportunities, improving outcomes, and maximizing productivity.

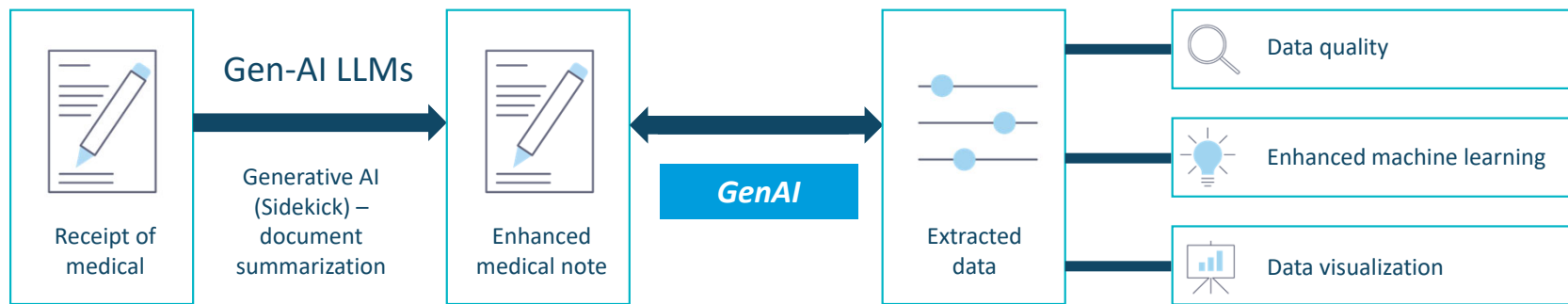
CLAIMANT INTERACTIONS

Proactively address claimant concerns through systematic identification of trends and concerns in written and verbal interactions.



AI in tandem

Automation of the quality review process through tagging of elevated risk claims for review.



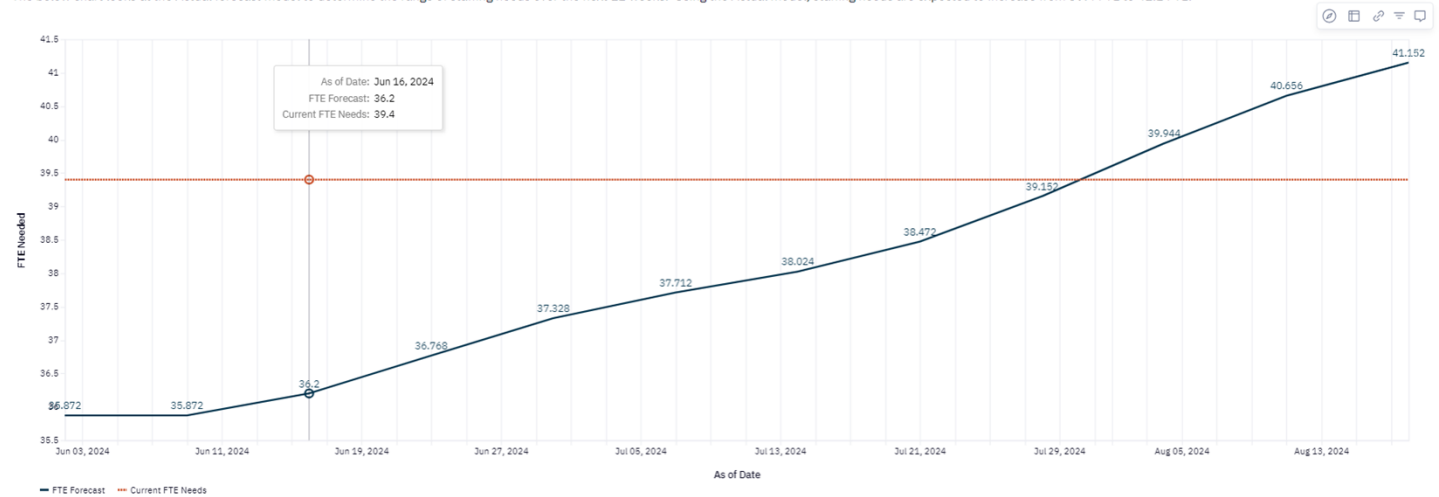


Dynamic staffing

Forecast claim volumes at set intervals from 4 to 26 weeks into the future – allowing proactive adjustment to staffing need to maintain optimal level of service.

FTE Assumptions

The below chart looks at the Actual forecast model to determine the range of staffing needs over the next 12 weeks. Using the Actual model, staffing needs are expected to increase from 39.4 FTE to 41.2 FTE.





Challenges and dangers

SECURITY CONCERNS	Data or IP leakage
REGULATORY COMPLIANCE	Legal environment, data residency rules, and usage standards are changing every day
RATE OF ADOPTION	Integration

“My guess is that we’ll have AI that is smarter than any one human probably around the end of next year.” - Elon Musk, April 2024



Bias in models

LLMs were trained on the information available in digital content, which includes the public internet

Current models are trained on tasks completed by humans, which may include pre-conceived bias, varying skill level, poor practices, etc.

Future: Models will be trained on content created by generative AI – tend to gravitate toward the mean.



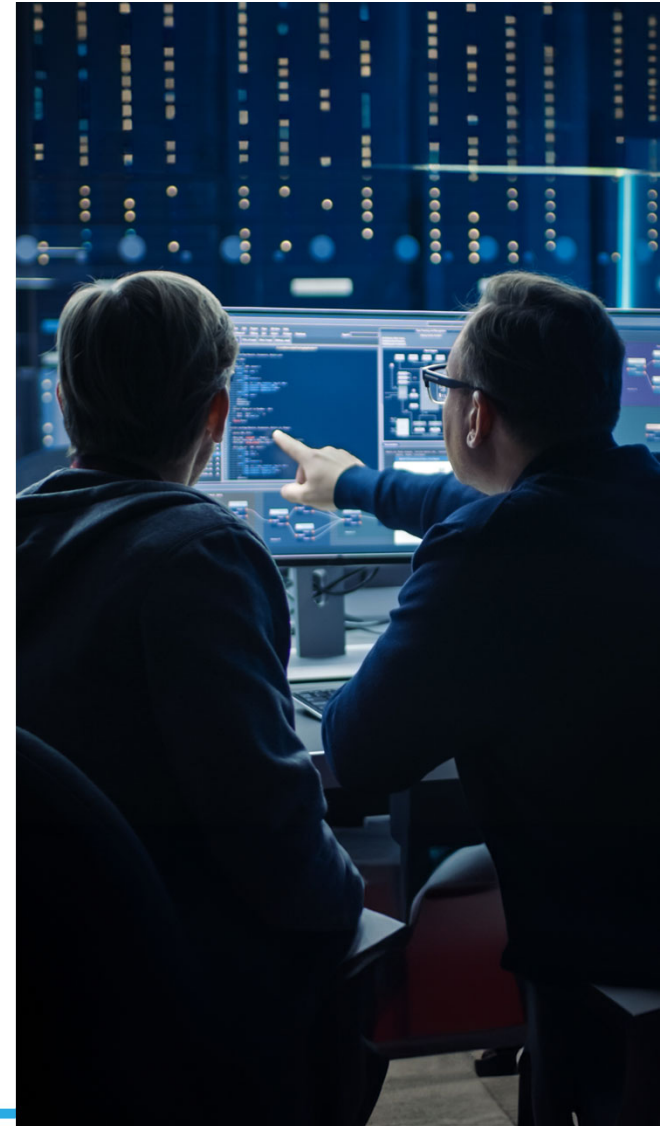


Overcoming bias

Scope business goals, current process, limitations to understand why a model is needed.

Leverage a wide variety of data sourced from different experiences or vendors

Detect bias in the data, scrub, clean or create synthetic training data to remove bias.





Building trust

FEEDBACK LOOP

Allows stakeholders to provide ongoing feedback AND ensure model is continually learning based on feedback.

MONITORING AND TRANSPARENCY

Have clear metrics for measuring modeling drift and success – aligning with stakeholders to clearly define and report.

CHECKS AND BALANCES

AI is not a direct replacement for people.



Why should we move forward?

- AI isn't currently a direct replacement for people.
- It enables people to be more efficient and potentially more effective by focusing on the human concepts of judgement and experience.
- Personalization will become more specific, useful, and real.
- Wouldn't it be great to streamline the mundane?



Conclusion

- This technology is rapidly evolving with new use cases developing everyday.
- Current disability and absence use cases vary widely – enhancing process and analytics.
 - Pairing generative and analytical AI can transform the way we do business.
- AI can be trusted when implemented in a fair and transparent manner.
- Understanding how AI and humans supplement each other is key to future success.





Thank you