



Athro
Consulting

Leveraging AI to Improve IG – And Vice Versa!

AIIM True North

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Agenda

- How AI Can Support RIM and IG
- How AI Can Go Bad
- How IG Can Improve AI



How AI Can Support RIM and IG

How AI Can Support RIM and IG

- Pattern recognition, e.g., SIN or SSN
- Textual analysis – natural language processing
- Metadata and pattern analysis
- Contextual and usage pattern analysis
- Leverage previous efforts to identify PII
 - Locations
 - Patterns of usage

Identifying PII, PHI, Etc.

- Use AI to analyze document contents
 - As they come into the organization
 - Legacy information stores like file shares



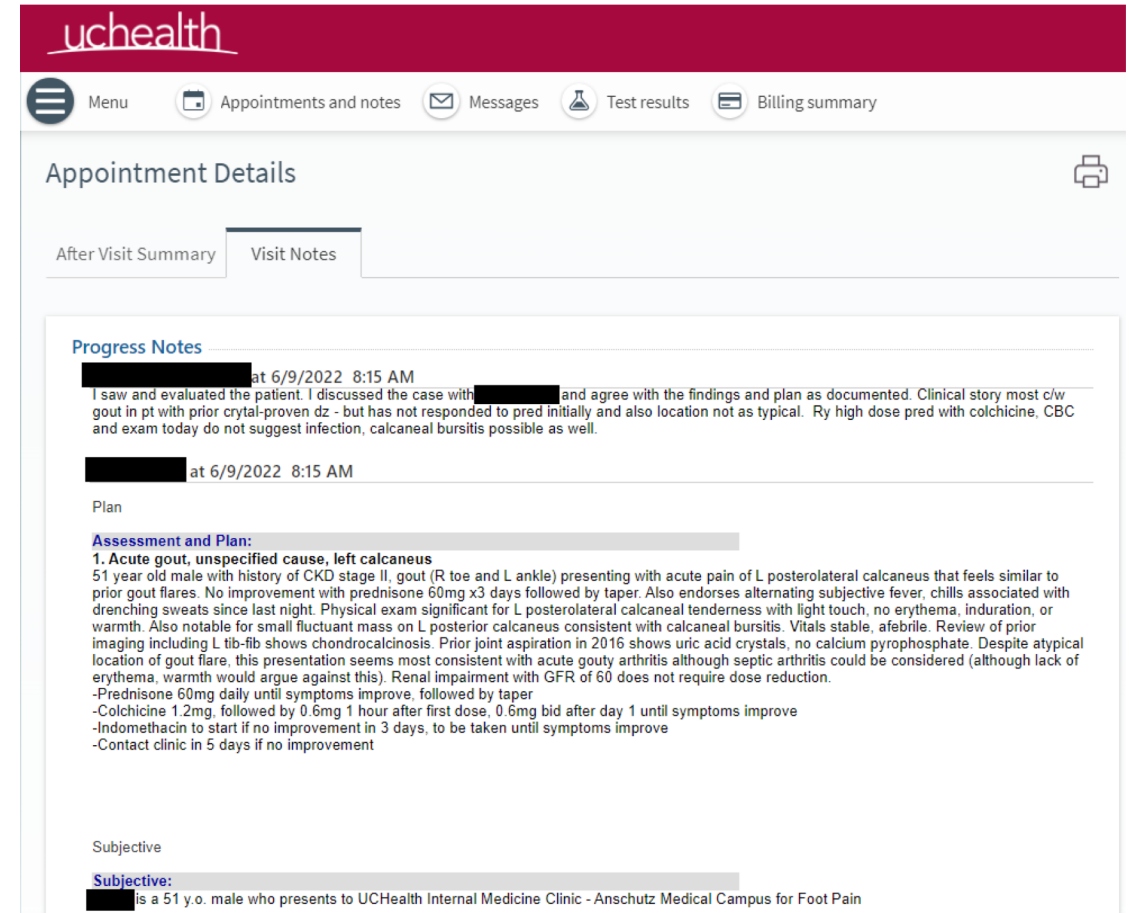


Automated Classification

Analyze document contents, context to identify potential classification target, metadata values

Automated Redaction or Anonymization

- Leverage pattern recognition to identify terms that need to be redacted or anonymized



The screenshot displays the UHealth patient portal interface. At the top, a maroon header contains the 'uhealth' logo. Below it, a navigation bar includes icons and labels for 'Menu', 'Appointments and notes', 'Messages', 'Test results', and 'Billing summary'. The main content area is titled 'Appointment Details' and features a sub-header 'After Visit Summary' with a 'Visit Notes' tab. The 'Progress Notes' section shows two entries from 6/9/2022 at 8:15 AM. The first note describes a patient evaluation and agreement with findings. The second note, under the heading 'Assessment and Plan', details a diagnosis of acute gout and provides a treatment plan including prednisone, colchicine, and indomethacin. The 'Subjective' section at the bottom identifies the patient as a 51-year-old male presenting to the clinic for foot pain. Redacted areas are indicated by black boxes throughout the text.

uhealth

Menu Appointments and notes Messages Test results Billing summary

Appointment Details

After Visit Summary Visit Notes

Progress Notes

[Redacted] at 6/9/2022 8:15 AM

I saw and evaluated the patient. I discussed the case with [Redacted] and agree with the findings and plan as documented. Clinical story most c/w gout in pt with prior crystal-proven dz - but has not responded to pred initially and also location not as typical. Ry high dose pred with colchicine, CBC and exam today do not suggest infection, calcaneal bursitis possible as well.

[Redacted] at 6/9/2022 8:15 AM

Plan

Assessment and Plan:

1. Acute gout, unspecified cause, left calcaneus

51 year old male with history of CKD stage II, gout (R toe and L ankle) presenting with acute pain of L posterolateral calcaneus that feels similar to prior gout flares. No improvement with prednisone 60mg x3 days followed by taper. Also endorses alternating subjective fever, chills associated with drenching sweats since last night. Physical exam significant for L posterolateral calcaneal tenderness with light touch, no erythema, induration, or warmth. Also notable for small fluctuant mass on L posterior calcaneus consistent with calcaneal bursitis. Vitals stable, afebrile. Review of prior imaging including L tib-fib shows chondrocalcinosis. Prior joint aspiration in 2016 shows uric acid crystals, no calcium pyrophosphate. Despite atypical location of gout flare, this presentation seems most consistent with acute gouty arthritis although septic arthritis could be considered (although lack of erythema, warmth would argue against this). Renal impairment with GFR of 60 does not require dose reduction.

-Prednisone 60mg daily until symptoms improve, followed by taper

-Colchicine 1.2mg, followed by 0.6mg 1 hour after first dose, 0.6mg bid after day 1 until symptoms improve

-Indomethacin to start if no improvement in 3 days, to be taken until symptoms improve

-Contact clinic in 5 days if no improvement

Subjective

Subjective:

[Redacted] is a 51 y.o. male who presents to UHealth Internal Medicine Clinic - Anschutz Medical Campus for Foot Pain



File Share Cleanup

- Use AI to confirm the absence of PII, PHI, etc. in a particular folder or location
- Combine with usage reports, e.g., a particular folder hasn't been accessed by anyone in 11 years
- As part of a migration, use AI to remediate file-level metadata



How AI Can Go Bad

The Dutch Tax Authority Was Felled by AI—What Comes Next? > European regulation hopes to rein in ill-behaving algorithms

BY RAHUL RAO | 09 MAY 2022 | 4 MIN READ | 📖



The Dutch Tax Authority and AI

- Families file claim with Dutch Tax Authority
- AI used to vet claims for signs of fraud
- Humans were to review potentially fraudulent claims
- But humans got busy....
 - And there was bias in the model
 - And there was no due process once the humans rubber-stamped the decision

Limited Data Sets

- How many different things are there on the road for drivers to be aware of?

Self-Driving Uber Hits, Kills Pedestrian in Arizona

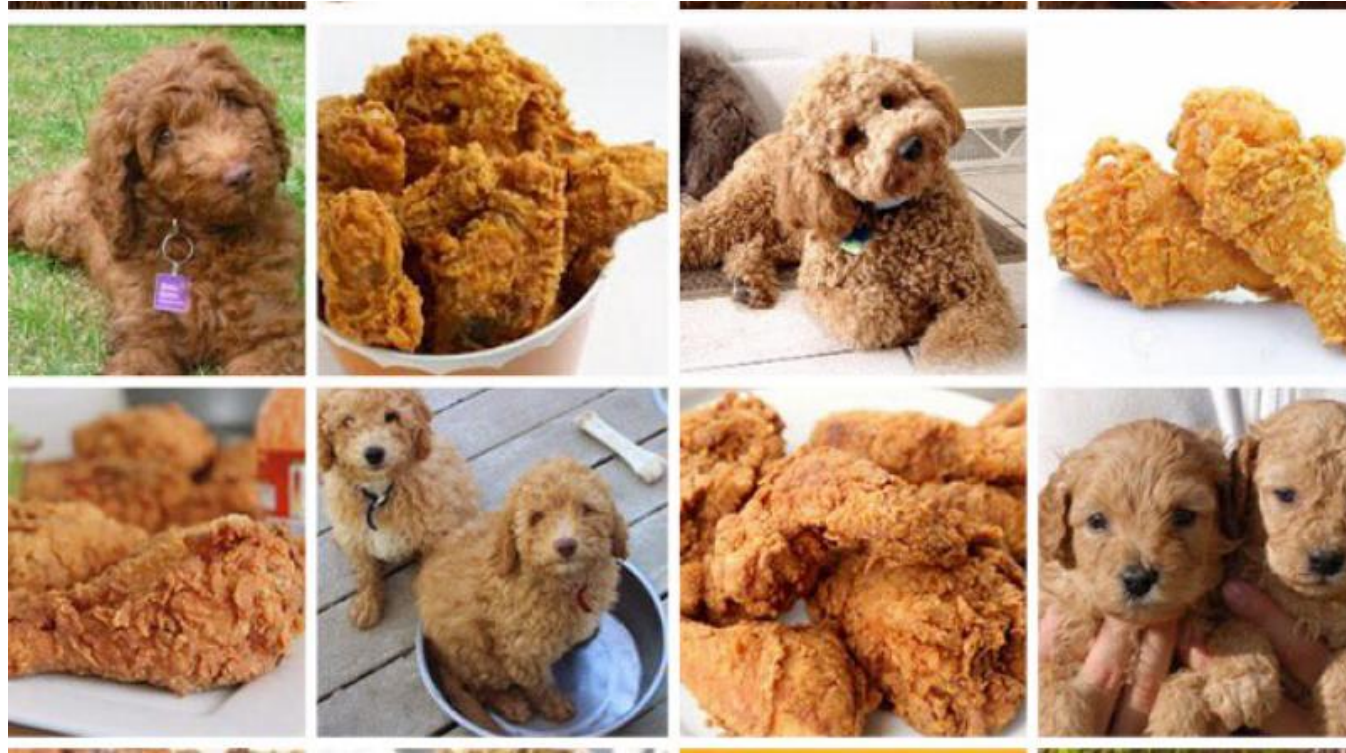
The Uber vehicle was operating in autonomous mode with a human behind the wheel in Tempe, Arizona, when the incident occurred overnight.



By [Angela Moscaritolo](#)

March 19, 2018





How IG Can Improve AI

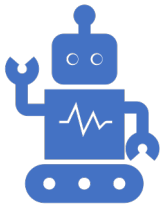
Improve Data Quality

- Garbage in, garbage out
- Using AI to tag & apply metadata can help...to a point
- Better: put effective IG processes in place at the front end

Better Representation

- Is the data representative of the decisions to be made?
- How can you test it?
- How many different use cases can you feasibly test?

Think Through the Use Cases



Is AI the right tool for the job?

“AI” means lots of things....



Are there privacy or security considerations?



Who should be involved in the discussion?

Business

RIM/IG

Legal

The ones implementing AI

Use Synthetic Data

- Synthetic data is just that
- No privacy issues because it's not real data
- Perfect metadata because it's created at the time the data is

Completely Synthetic Data

```
emp_id, emp_first, emp_last, emp_dob, emp_sin, emp_strad1, emp_strad2, emp_city, emp_prov, emp_PC
```

```
0000001, John, Smith, 01011970, 123456789, 123 Anywhere St., , Ottawa, ON, K1B 0A0  
0000002, Jane, Smith, 01011971, 234567890, 234 Anywhere St., , Ottawa, ON, K1B 0A0  
0000003, Tom, Thumb, 01011972, 345678901, 345 Anywhere St., , Ottawa, ON, K1B 0A0
```

Synthesis by Disjunction

emp_id, emp_first, emp_last, emp_dob, emp_sin, emp_strad1, emp_strad2, emp_city, emp_prov, emp_PC

0000001, John, Smith, 01011970, 123456789, 123 Anywhere St., , Ottawa, ON, K1B 0A0
0000002, Jane, Smith, 01011971, 234567890, 234 Anywhere St., , Ottawa, ON, K1B 0A0
0000003, Tom, Thumb, 01011972, 345678901, 345 Anywhere St., , Ottawa, ON, K1B 0A0

0000001, John, Thumb, 01011970, 123456789, 345 Anywhere St., , Ottawa, ON, K1B 0A0
0000002, Jane, Smith, 01011971, 234567890, 123 Anywhere St., , Ottawa, ON, K1B 0A0
0000003, Tom, Smith, 01011972, 345678901, 234 Anywhere St., , Ottawa, ON, K1B 0A0



Focus on Transparency

- Any use of AI should be transparent
 - What it's used for
 - How it came to its recommendations
- The role of the “human in the loop”



Questions?



Thank you!



For More
Information

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