

American College of Coverage Counsel 2024 Insurance Law Symposium

University of Minnesota Law School

Minneapolis, MN

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Artificial Intelligence as Friend (WALL·E!) or Foe (HAL9000!):

An exploration of generative AI Concepts; AI Assisted Policy Drafting and Underwriting; and the Use of AI in Insurance Claims Investigation and Handling

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GOOD Artificial Intelligence BAD



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Today's Focus: Two Types of AI

Machine learning

VS.

Symbolic/Rules-based AI

Machine learning:

Neural networks

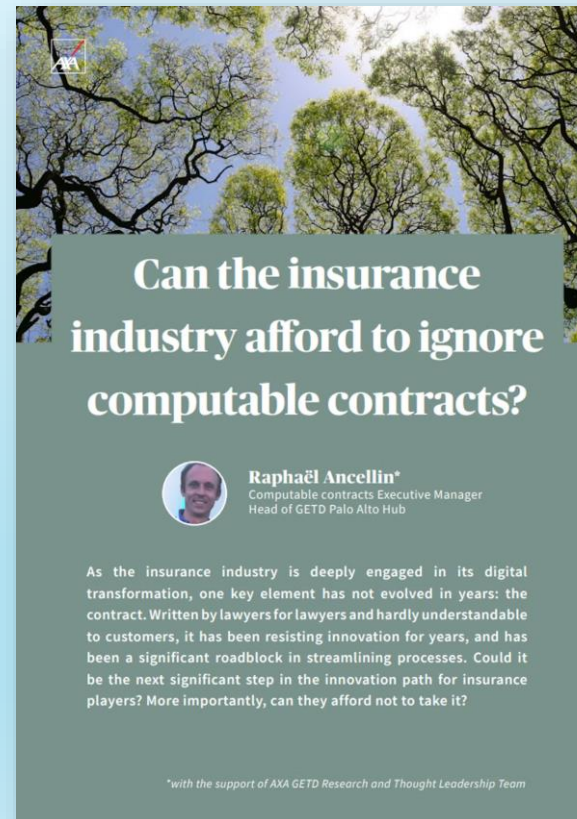
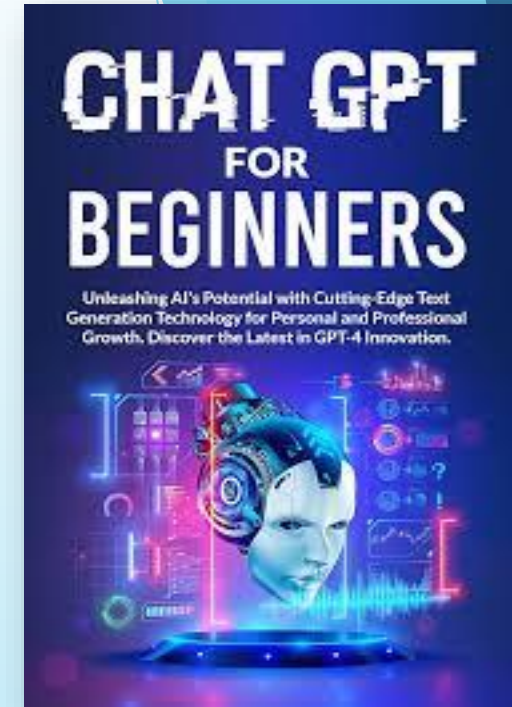
Generative AI

Large Language Models

Symbolic:

Computable Contracts

Explicit logical conditions



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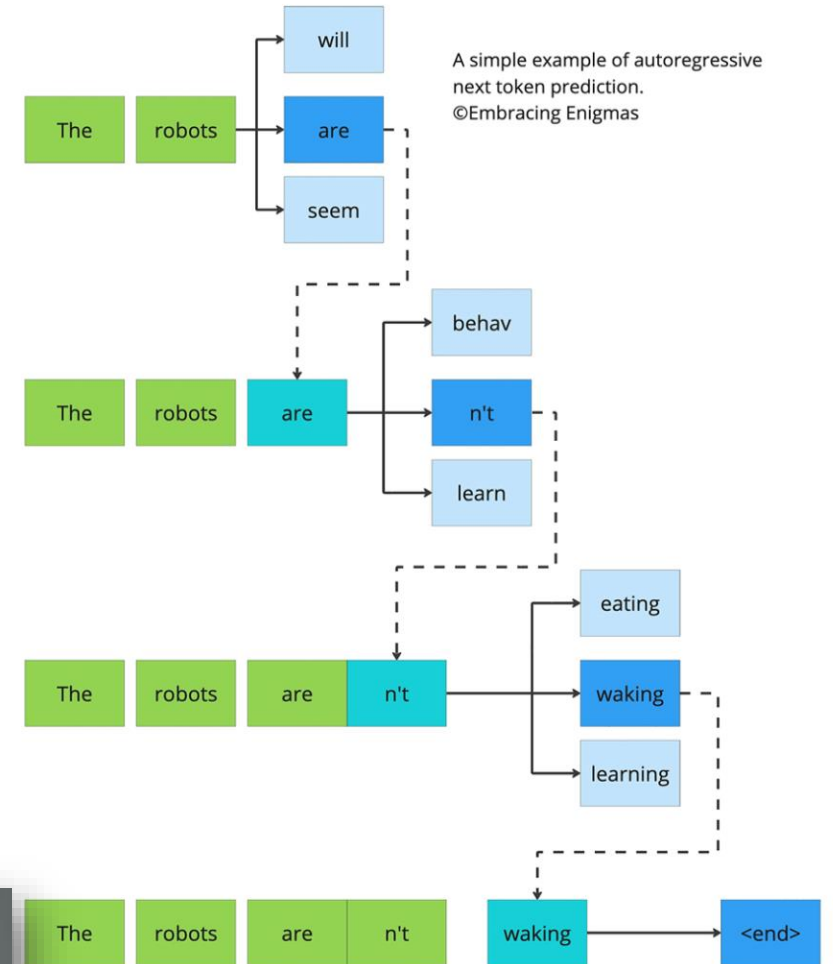
Generative AI

Example: ChatGPT - Understands & generates human-like text in a conversational format

Understanding its creation - next token prediction

"It's a promising approach to artificial general intelligence..."

Understanding its limitations



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Generative AI

". . . plausible-sounding random falsehoods . . ."

Example: ChatGPT

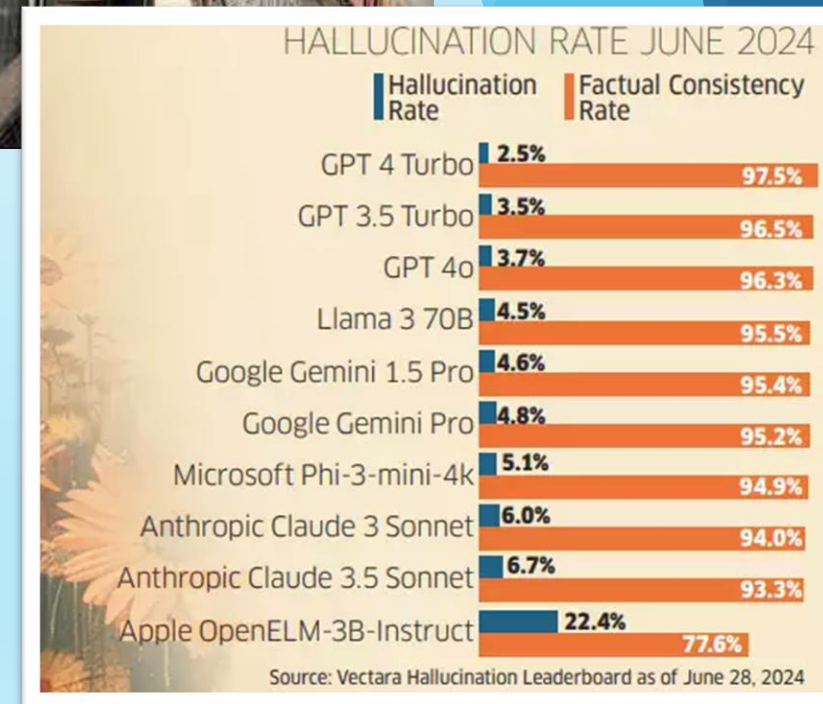
Reliability and trustworthiness

"Hallucinations" - bullshitting; confabulation; delusion

Fakes



". . . like an omniscient, eager-to-please intern who sometimes lies to you."



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Computable Contracts

Automated reasoning based on predefined conditions

Explicit logical rules (cf. Smart Contracts)

Avoids variance and uncertainty in contract wording

Front-end agreement on the meaning of terms



Computable Contracts



Traditional
Insurance Policy

Claim
Submission

Human
Review

Claim
Determination

Computable
Insurance
Policy

Claim
Submission

Claim
Determination



CODEx
The Stanford Center for Legal Informatics



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Computable Contracts in Insurance

Insurance policies are “[w]ritten by lawyers for lawyers and hardly understandable to customers” and have been “resisting innovation for years.”

Potential in the insurance space

Commercial v. Personal Lines products

Practicality/real world examples

Potential benefits for the underwriting process

Potential benefits for claims - both parties



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Computable Contracts

Example Computable Insurance Policy for Healthcare



STANFORD UNIVERSITY
POSTDOCTORAL SCHOLARS
Medical Grp# 109047-012-00001

Choice POS II

ISSUER (80840) 9140860054
ID W1234 56789

Name:
01 JENNIFER Q SAMPLE-TESTCARD

02 JONATHAN Q SAMPLE-TESTCARD 03 CAITLEN Q SAMPLE-TESTCARD

04 EMILY Q SAMPLE-TESTCARD 05 KARA Q SAMPLE-TESTCARD

RX BIN# 610502

POP: 1 5 00
EPC: 1 200 00

Claim Specification

Not Covered

POLICY INFORMATION

Have signed policy: ☐

Amount paid for insurance premium so far: \$

Have provided confirmation of wellness visit: ☐

Policy has been canceled: ☐

PATIENT INFORMATION

Patient Age:

HOSPITALIZATION INFORMATION

Reason for hospitalization:

Cause of hospitalization:

Country in which hospitalization occurred:

Start date of hospitalization:

Start time of hospitalization:

End date of hospitalization:

End time of hospitalization:

Traditional Contract

SUPPLEMENTAL HOSPITALIZATION CASH POLICY

Between:

CODEX INSURANCE LIMITED ("us")

and

_____ ("You")

This policy is provided on the following terms and conditions:

1. POLICY IN EFFECT AND CONDITIONS

1.1 The payment of any benefit under this policy is conditioned on the policy being in effect at the time of the hospitalization for sickness or accidental injury on which the claim for such benefit is premised.

The policy will be in effect if:

- (a) This agreement is signed,
- (b) The applicable premium for the policy period has been paid, and
- (c) The condition set out in Section 1.3 is still pending or has been satisfied in a timely fashion, and
- (d) The policy has not been canceled.

1.2 Cancellation will be deemed to have occurred if there is fraud, or any misrepresentation or material withholding of in any information provided by you to the Company in connection with any communication or information relating to this policy, or if the condition set out in Section 1.3 has not been satisfied in a timely fashion. It will also be automatically canceled at midnight, US Eastern time then in effect, on the last day of the policy term described in Section 5 below.

1.3 No later than the 7th month anniversary of the

Computable Contract

```
covered(C, N) :-  
  claim.policy(C, P) &  
  policy.in_effect(P) &  
  claim.hospitalization(C, H) &  
  hospitalization_conditions_met(H) &  
  benefit_calc(C, N) &  
  ~exclusion_applies(C)
```

```
policy.in_effect(P) :-  
  policy.signed(P) &  
  policy.paid_premium(P) &  
  condition_met_1.3(P) &  
  ~policy.canceled(P)
```

```
condition_met_1.3(P) :-  
  policy.wellness_visit_confirmation_provided(P)
```

```
policy.paid_premium(P) :-  
  policy.premium_amount_paid(P, A) &  
  geq(A, 2000)
```

```
hospitalization_conditions_met(H) :-  
  hospitalization_valid_reason(H) & hospitalization.country(H, usa)
```

```
hospitalization_valid_reason(H) :- hospitalization.reason(H,  
sickness)
```

```
hospitalization_valid_reason(H) :- hospitalization.reason(H,  
accidental_injury)
```

```
exclusion_applies(C) :-  
  claim.hospitalization(C, H) &  
  hospitalization.causal_event(H, skydiving)
```

```
exclusion_applies(C) :-  
  claim.hospitalization(C, H) &  
  hospitalization.causal_event(H, military_service)
```

```
exclusion_applies(C) :-
```



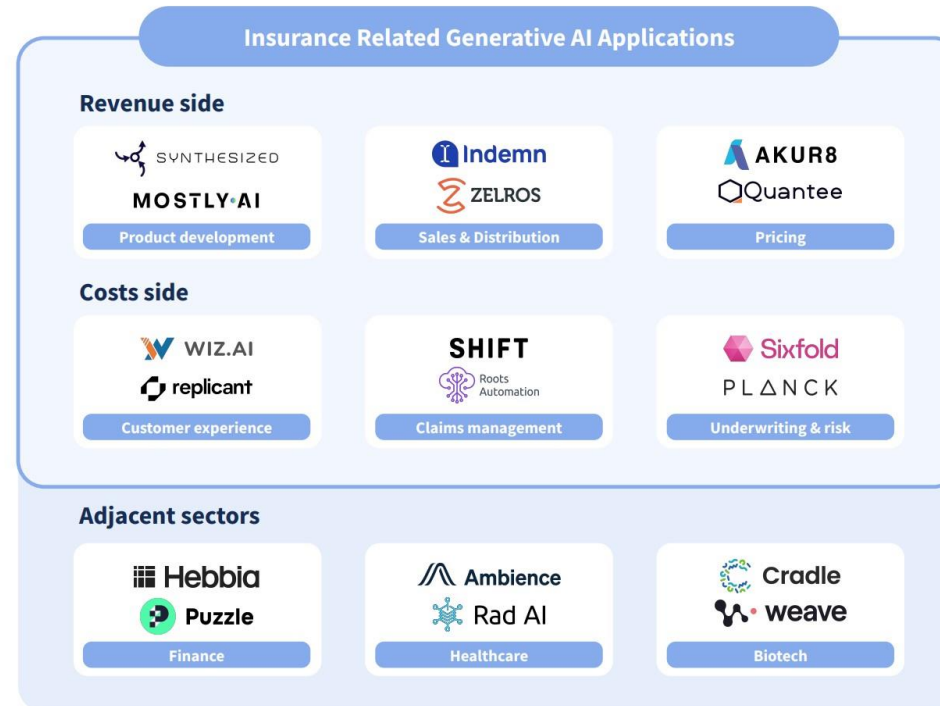
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Common sources of third- party AI technology

Several insurtechs have started up to bring GenAI native underwriting, claim processing, AI agents and customer support, or are adding GenAI powered features to their B2B SaaS offerings or to their internal operations.



Generative AI can help navigate the complex regulations of the insurance sector, build up customer data and increase efficiency in some of the industry's labour-intensive and time-consuming tasks.

Example use cases:

- Streamlining of sales & distributions with the automation of administrative tasks
- Improvement of underwriting with the collection of data
- Better customer experience with digital human like innovations
- Automation of claims management



Underwriting AI Considerations

*“Artificial intelligence remains a tool to assist underwriters...
rather than be their replacement.”*

Human component - good and bad

Submission accuracy/verification

Fraud detection

Review/analysis of large data files

Pricing impact



Swiss Re



**THE
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Claims Handling AI Considerations

"[A] third of all claimants say they were not fully satisfied with their most recent claims experience. - Accenture

AI as a process enhancement

Automated claim submission/review

Completion of rote tasks

Remote electronic inspection

Review/analysis of large data files

COMPENSA 
VIENNA INSURANCE GROUP

Lemonade



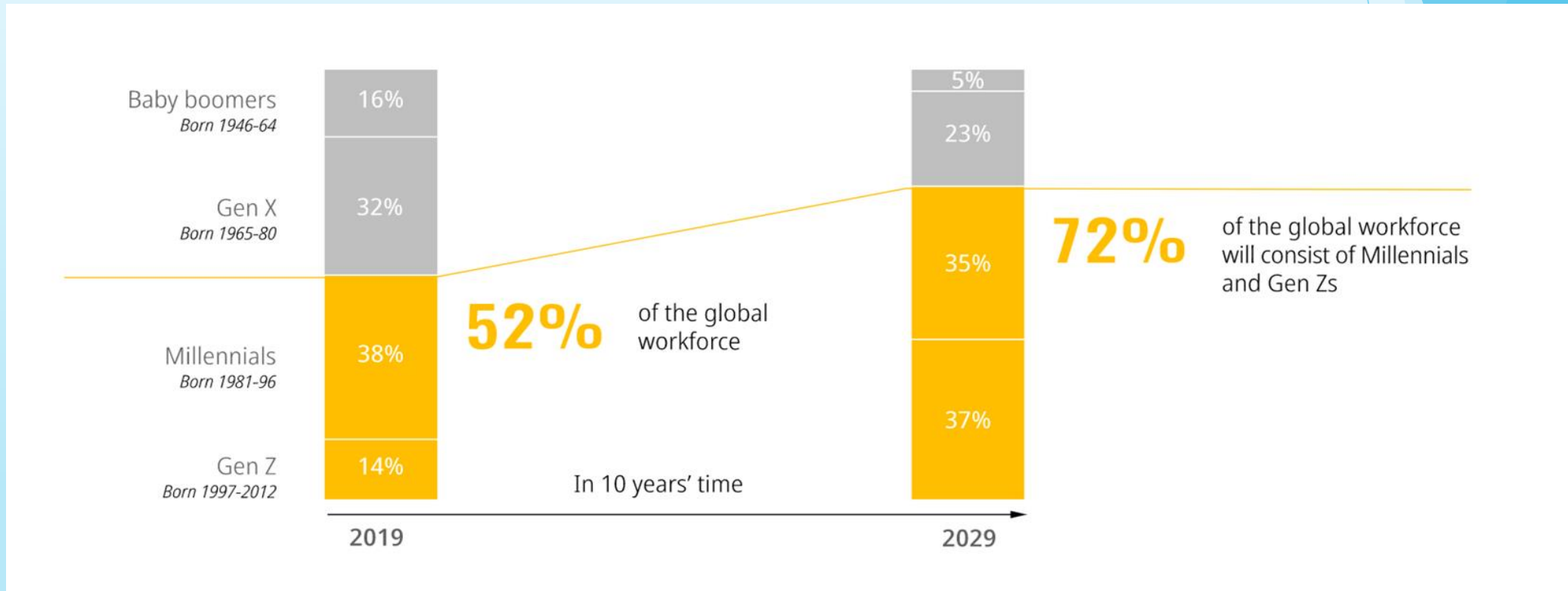
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Underwriting and Claims Handling AI Considerations

By 2029, Millennials and Gen Z will be 72% percent of the workforce



Underwriting and Claims Handling AI Challenges

[I]nsurers openly discriminate among individuals based on observable characteristics . . . so that they can charge different premiums to different groups of insureds . . . “

Bias

Identifying best practices/standard of care

Over and under reliance on technology

Cost and risk of updating/not keeping current

Data/privacy protection

Accuracy/hallucinations

Worker displacement

Environmental impact

Attorney-client privilege



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Underwriting AI Future

“In 2030, underwriting as we know it today ceases to exist for most personal and small business products across life and property and casualty insurance. The process of underwriting is reduced to a few seconds as the majority of underwriting is automated and supported by a combination of machine and deep learning models built within the technology stack.”

McKinsey
& Company



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Claims Handling AI Future

“[In 2030], more than half of claims activities have been replaced by automation. Advanced algorithms handle initial claims routing, increasing efficiency and accuracy. . . The turnaround time for resolution of many claims is measured in minutes rather than days or weeks. Human claims management focuses on a few areas: complex and unusual claims, contested claims where human interaction and negotiation are empowered by analytics and data-driven insights . . .”

McKinsey
& Company



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Questions?



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