Generative AI for Knowledge Linking: The Future of AVEVA

David Smith | Principal AI Engineer | AVEVA AI CoE
Lori Warda | Senior Product Manager | AI and Analytics
Generative AI

ChatGPT burst in the headlines in 2023

Microsoft announces new multibillion-dollar investment in ChatGPT-maker OpenAI

HustleGPT: Generative AI will boost income and help millions of workers take on second and third jobs, Morgan Stanley predicts.

Hackers are selling a service that bypasses ChatGPT restrictions on malware

How to get your data ready for the generative AI revolution
"It is a mistake to think you can solve any major problems just with _____"
AVEVA Knowledge Linking

... leveraging the power of LLM in the AVEVA Connect platform

- Fast Onboarding - Data inferencing finds relationships without a hierarchy or structured entity relationships
- Objective-driven queries – break down complex queries into multiple sub-tasks to get a consolidated response
"What was the average power of Turbine 01 last week?"

The average was 285 kw, would you like a trend?
The AI Assistant is working hard to ensure good results

- **Prompt Engineering**: We tell it what it is and how it should behave. “You are a friendly, truthful, informative, industrial AI analyst. If you don’t get any data back from the tool just tell the user you don’t have the data for their question.”
- **Critique**: the orchestrator critiques its own plan

- **Citations**: We show the data used to make the decisions which the system thinks is relevant
- **Real Data**: The LLM is the communication conduit, but the workflow has to use tools and real data. If it can’t find the answer using those tools it can’t just supplant its own answer.

- **User Context**: All data access is using your existing security context
- **Throw away**: LLM is never trained with your data – it’s stateless. All requests sent to the LLM are ‘thrown away’
• **Prompt Engineering:** We tell it what it is and how it should behave. “You are a friendly, truthful, informative, industrial AI analyst. If you don’t get any data back from the tool just tell the user you don’t have the data for their question.”

• **Critique:** the orchestrator critiques its own plan.
Grounding

- **Citations:** We show the data used to make the decisions which the system thinks is relevant.
- **Real Data:** The LLM is the communication conduit, but the workflow has to use tools and real data. If it can’t find the answer using those tools it can’t just supplant its own answer.
Security

- **User Context:** All data access is using your existing security context
- **Throw away:** LLM is never trained with your data – its stateless. All requests sent to the LLM are ‘thrown away’
Takeaways

AVEVA Knowledge Linking and Industrial Assistant will transform your experience

• AVEVA Knowledge Linking accelerates on boarding by building relationships using inferencing, no need to pre-build an extensive Knowledge Graph.

• AVEVA Knowledge Linking extends the LLM by integrating the power of LLM with your industrial data, even when it is siloed so you can quickly find and summarize the information you need.

• AVEVA is using best practices to ensure that your data is protected and to reduce hallucinations.
Questions?

Please wait for the microphone.
State your name and company.

Please remember to...

Navigate to this session in the mobile app to complete the survey.

Thank you!
Learn more about AVEVA AI

Industrial AI@ AVEVA World Conference 2023– San Francisco

• **Day 2: Industrial AI Track**
  - **AVEVA**: AVEVA Connect, Industrial Cloud Platform – Vision, roadmap, and starting your operations and engineering digital twin journey [14:00]
  - **AVEVA**: Power your secure industrial ecosystem of data, applications, and partners with AVEVA Data Hub connected communities [14:40]
  - **AVEVA**: Accelerate Your Time to Value with Analytics and Applications Fueled by AVEVA Data Hub [15:40]
  - **AVEVA**: On your marks, get set, Unleash your Operational Data in the Cloud! [16:20]
  - **AVEVA**: Aggregating Engineering Content, Data and Documents and Real-Time Data into a Common User Experience [17:00]

• **Day 3: Industrial AI Track**
  - **AVEVA**: Four Imperatives of a Trusted Information Infrastructure [10:45]
  - **AVEVA**: Deploy Edge Data Store and Adapters in minutes with AVEVA Edge Management [11:25]
  - **AVEVA**: Uniting the connected community through secure and transparent industrial data sharing [14:25] [this talk]
  - **AVEVA**: Harnessing the power of Sequential Data Store (Sds) and Assets for developers and partners [15:30]
  - **AVEVA**: Aggregating data with Data Hub asset rules and data views for analytics and applications [16:25]
Dr. David Smith

Principal AI Engineer

• AVEVA
• david.a.smith@aveva.com

Lori Warda

Senior Product Manager – AI & Analytics

• AVEVA
• lori.warda@aveva.com
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The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.
“What is the wind speed at my windfarm?”

Tag ID: 01HAD102WindSp10

Tag Description: Hornsea Wind Farm Wind Speed

Information: This is a wind speed measurement measured using an anemometer mounted in the nacelle of the wind turbine. It is the average measurement of all the wind speeds measured across GE01 - 21
Throw Away

- **User Context:** All data access is using your existing security context (impersonation)
- **Throw away:** LLM is never trained with your data – its stateless. All requests sent to the LLM are ‘thrown away’
Enabling Technologies: Hybrid Semantic Search