### Middlecon

# DATA SERVER DAY 2024

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#DATASERVERDAY





## Meet the speaker

#### **Bård Hakkestad** Big Data Business Architect

Middlecon

- Norwegian "Spark Professional".
- +30 years selling data solutions in the Nordics
- Expert in IBM and Cloudera
- Focus on Big Data, AI, Data Lakehouse

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Datalakehouse onprem or cloud

## Today's agenda

08:00 – 09:00 Breakfast mingle

09:00 – 09:15 Welcome intro - AI Today by Bård Hakkestad, Middlecon

09:15 – 10:15 Keynote Trends & Directions – Les King, IBM

10:15 – 10:45 Coffee break

10:45 – 11:30 Creating Iceberg and Hive datalake tables with Db2 – Kelly Schlamb, IBM

11:30 – 12:00 Leverage your mainframe data for AI and analytics by landing Db2 for z/OS, IMS and VSAM data directly in Apache Iceberg tables on object storage – Rickard Linck, IBM

12:00 – 13:00 Lunch

13:00 – 14:00 Db2 Cloud and SaaS Update – including Db2 Amazon RDS (fully managed Db2 as a Service) – Les King, IBM & Chris Hutchings, Amazon

14:00 – 14:45 Integrate Db2 with Lakehouse (watsonx.data) – Kelly Schlamb, IBM

14:45 – 15:15 Coffee break

15:15 – 16:15 Db2 v12 – Les King, IBM

16:15 – 17:00 Panel discussion: AI in Business – Challenges, Opportunities, and Real-Life Experiences led by Tahira Naeem, Arrow. Panelists: Daniel Palmgren, Länsförsäkringar, Berry Österlund, Middlecon and Therése Svensson, IBM

17:00 – 19:00 After mingle 🍕 🛽

# Our objective is to become the leading provider in the Nordic region for large-scale data transfer and data management.



# We aim to empower our customers with the best tools to transition into a data-driven business model.



## **Our services**

#### Focus areas

- IBM
- Cloudera
- Open Source
- IBM Mainframe (new)

#### Service deliverables

- Time & Material
- Managed Services
- Operations and Support
- Team delivery
- Projects



## What is Al?

- **Machine Learning -** Algorithms that improve their performance by learning from data, without being explicitly programmed.
- **Deep Learning -** Advanced neural networks modeled after the human brain, capable of recognizing patterns and making decisions.
- **Natural Language Processing -** The capability of AI to understand, interpret, and generate human language in a meaningful way.
- **Computer Vision -** The ability of AI to analyze and understand visual information from the world, such as images and videos.



# Here's how AI will be used

#### Neurala Networks

- **CNN (Convolutional Neural Networks):** For image processing and computer vision.
- RNN (Recurrent Neural Networks): For sequential data such as text and time series.
- **Transformer:** For large language models like GPT-3.

#### **Machine Learning Algorithms**

- Supervised Learning: Classification, regression.
- **Unsupervised Learning:** Cluster analysis, dimensionality reduction.
- **Reinforcement Learning:** The agent learns through interaction with the environment.

#### **Data Preprocessing**

- **Data Cleaning:** Handle missing values, outliers, and inconsistencies.
- **Feature Engineering:** Transform raw data into usable features for models.

#### **Model Evaluation**

• **Metrics:** Accuracy, precision, recall, F1-score.

#### MLOps

• The lifecycle of machine learning projects, from data collection to production.

## Examples of Swedish AI implementations



### IKEA is using AI drones for inventory management

#### lkea tar hjälp av drönare i varuhusen



På Ikeas lager surrar drönare i bolagets färger gult och blått. Foto: Ikea

De är små, flyger och ger svar på tillgången av varor. Drönare har blivit lagerarbetarnas bästa vän på lkeas lager. Bolaget ser en ökad effektivitet, samtidigt som medarbetarnas produktivitet förbättras.





### SiB Solutions: Leveraging AI for Precision Inventory Management and Error Prevention





# IPercept builds predictive AI maintenance solutions



Technology

#### THE FITNESS TRACKER OF INDUSTRIAL MACHINES

Powered by experience-driven AI





# Apendo uses a conversational AI to deliver intuitive answers to citizens' questions





# New AI models common grounds

- Mix of structured and unstructured data
- Use of new tools
- Large amount of data



## AI Demystified

#### "Do I need to create my own AI model?"

 No, almost everyone is going to buy a commercial AI-model or download Open Source AI-model.

#### "Do the new EU AI-regulations highly impact my AI usage?"

- No, 99% will not be affected.
  - The model lacks personal data.
  - Another party is responsible for reporting.
  - Existing legislation already covers the requirements.

## Quote

### "AI helps humans, and that humans needs to:

# Align the AI to your needs Control your AI as you go Help the AI to finnish it's job when its stuck"

- Damir Kopljar



## The Hunt for Data

- Your AI model will be the same as your competitor's.
- Whoever has the most data, or can quickly acquire data, will win (since they can train on more data).
- Save all your data today; you never know what data you might need tomorrow.
- Even incorrect data can have a value.



# Which companies will use AI?

# All of them.



# Middlecon

Looking for assistance with your Data Lakehouse or Al projects?

We're here to help! Contact us at info@middlecon.se