Software Overview

Thomas Gabriel

20 March 2019

#KNIMESummit2019
Creating Data Science with KNIME Analytics Platform

Data Blending
Data Analytics
Predictive Analytics
Machine Learning
Artificial Intelligence

Load → Transform → Analyze → Visualize

KNIME Integrations
KNIME Extensions
Community Extensions
Partner Extensions

Open Source

Data Science
Creating Data Science with KNIME Analytics Platform

SESSION 4: KNIME ANALYTICS PLATFORM

9:30 AM
Room C 01

What's New in KNIME Analytics Platform
Bernd Wiswedel and Team (KNIME)

The KNIME Image Processing Extension for Biomedical Image Analysis
Andries Zijlstra (Vanderbilt University Medical Center) & Kevin Eliceiri (University of Wisconsin-Madison)

Spectral Data Analysis for Hair Quality Prediction: The Smart Salon Concept
Lucile Bonnin (Henkel Beauty Care)
Productionizing Data Science with KNIME Server

Collaborate | Automate | Manage | Deploy

KNIME Server

Collaborate in teams

Automate workflow execution

Manage and monitor

Deploy applications and services

Business Apps

Marketing and Sales

Financial

Product R&D

Manufacturing

IT

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Productionizing Data Science with KNIME Server

SESSION 6: KNIME SERVER IN ACTION

What's New in KNIME Server
Jim Falgout (KNIME)

Optimized Predictive Planning with KNIME
Michael Schaarschmidt, Christian Gräber (Deutsche Telekom)

From Promotional Profitability to Predictive Marketing
Marc Tissington, Leander Quiring (Canadian Tire)

Classification of Customer Feedback
Katharina Pape (TUI InfoTec)
Operationalizing Data Science for Teams

Data Science Teams
- Data Blending
- Data Analytics
- Predictive Analytics
- Machine Learning
- Artificial Intelligence

Business Teams
- Marketing and Sales
- Financial
- Product R&D
- Manufacturing
- IT

Source: CRISP-DM, Cross-Industry Standard Process for Data Mining
From Data Science to Business Applications

- Large, complex variety of technologies
- Providing skills and resources
- Continuous high-quality, delivery
- Mainstreaming across the organization

Data Science Driven Business Applications
From Data Science to Business Applications

11:30 AM Room C 01
PARALLEL SESSION 5a: LIFE SCIENCE
KIMBLE: A Comprehensive KNIME Workflow for Clinical NMR Metabolomics
Aswin Verhoeven (Leiden University Medical Center)

ProteinsPlus via KNIME: Supporting Structure-Based Design Studies
Eva Nittinger (ZH, Hamburg University)

Enabling Efficient Food Safety Knowledge Exchange with FSK-Lab
Matthias Filter (German Federal Institute for Risk Assessment (BrR))

11:30 AM Room B 07-09
PARALLEL SESSION 5b: MANUFACTURING AND IOT
So far and yet so close: Grey Market Analytics within a Global Business Setting
Johanna Lutz, Alec Sproten (Star Cooperation)

Asset Health Tracking in Manufacturing: An IIoT Fitness Tracker for Production
Martin Plank (Festo)

Market Simulation with KNIME: An Economic History of Beer
Ted Hartnell (Scientific Strategy)

11:30 AM Room B 05-06
PARALLEL SESSION 5c: CUSTOMER INTELLIGENCE AND AUTOMATION
Data Analysis Modernization
Diego Facchini (HSE24), Marco Ragogna (IWS Consulting)

Ads and Advertising Automation
Samuel James (Palo Alto Networks)

Automated Extraction of Balance Sheet Information: A Machine Learning Approach
Kilian Retter, Christine Diegel (Landesbank Baden-Württemberg),
Michael Höhn (AI.Associates)
Creating Data Science with KNIME Analytics Platform

Creating Data Science

- Large, complex variety of technologies
- Providing skills and resources
- Continuous high-quality, delivery
- Mainstreaming across the organization

Data Science Driven Business Applications

- R&D
- MFG
- IT
- Marketing
- Sales
- more...
- Pharma
- CPG
- Financial
- Automobile
- Retail
- more...
Creating Data Science with KNIME Analytics Platform

Creating Data Science

12:00 PM
Room C 01

SESSION 1: DATA SCIENCE IN ACTION

Predictive Maintenance of the District Heating System of Vienna
Ines Lindmeier (Wien Energie)

A Journey from Community Building to Quick Wins
Katja Meinunger, Philipp Kowalski, Tobias Hornig, Matthias Stephan (Siemens)

R&D | MFG | IT | Marketing | Sales | more...
Pharma | CPG | Financial | Automobile | Retail | more...
Productionizing Data Science Apps with KNIME Server

### Productionizing Data Science Applications

- Large, complex variety of technologies
- Providing skills and resources
- Continuous high-quality, delivery
- Mainstreaming across the organization

### Data Science Driven Business Applications

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<thead>
<tr>
<th>R&amp;D</th>
<th>MFG</th>
<th>IT</th>
<th>Marketing</th>
<th>Sales</th>
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<tr>
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<td>CPG</td>
<td>Financial</td>
<td>Automobile</td>
<td>Retail</td>
<td>more...</td>
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Productionizing Data Science Apps with KNIME Server

Productionizing Data Science Applications

SESSION 3: DEPLOYING DATA SCIENCE

4:00 PM
Room C 01

What's New for Deployment
Christian Dietz and Team (KNIME)

Using Predictive Modelling to Help People with Disability
Andrew Dun (Life Without Barriers), Heshan Henry (Forest Grove Technology)

A Business User's Logistics Case: From Analytics to Colorful Excel Reports
Arne Beckhaus (Continental)

Guided Automation
Christian Dietz and Team (KNIME)

Pharma  CPG  Financial  Automobile  Retail  more...
Education and Evangelism
Courses, Meetups, Books, and more

KNIME Evangelists
Courses

- **Introductory Course to Data Science** (e-learning @ KNIME)
- **Bootcamp for KNIME Analytics Platform** (e-learning @ Udemy)
- **Code free Data Science** (e-learning @ coursera with UCSan Diego - tba)
- **Machine Learning with Big Data** (e-learning @ coursera with UCSan Diego)
- **KNIME Server Data Scientists** (Online Course @ KNIME - March 27)
- **KNIME for Beginners** (Online Course @ KNIME - May 8)
- **KNIME Advanced** (Online Course @ KNIME - June 12)
- **Onsite Courses** (Berlin, Austin, Zurich, ... @ KNIME)
Certification Program

- **5 levels**
  - **L1**
    - Proficiency in KNIME Analytics Platform for ETL and Visualization
    - Examination: 45 minute multiple-choice questionnaire
  - **L2**
    - Advanced proficiency in KNIME Analytics Platform and Basic Machine Learning
    - Examination: 45 minute multiple-choice questionnaire and a data science project (up to 6 hours of work over one week)

knime.com/certification-program
New Books and Book Series at KNIME Press

- KNIME Beginner’s Luck to start your journey
- KNIME Advanced Luck To deepen your knowledge
- The “Will they blend?” Collection All you need to know on Data Blending
- From SAS to KNIME to transition from SAS
- From Excel to KNIME to transition from Excel
- From Words To Wisdom For Text Processing
Practicing Data Science: 2\textsuperscript{nd} Edition

- \textit{2nd Edition: 22 Case Studies}!
- Available at KNIME Press: https://www.knime.com/knimepress
- Select book “Practicing Data Science”
- For free copy, use Promotion Code:

\text{PRACTICING-DATA-SCIENCE-2ND-EDITION}
Social Media

KNIME analytics

KNIME

KNIME TV

@KNIME_official New!
Not really new, just a come back: Webinars
New Version of KNIME Documentation

Documentation for KNIME Analytics Platform, KNIME Server, KNIME Integrations, and KNIME Extensions under https://docs.knime.com/

Follow links to other learning materials, such as videos in the E-Learning course:

Creating a New Workflow
- To create a new workflow, right-click anywhere in your local workspace, and select New KNIME Flow from the menu. Use one of the options explained in Building Workflows.
- Give the workflow a name, and define the destination of the new workflow.
- Click Finish, and the new workflow will be added to the selected workflow group in the KNIME Explorer.
- If you want to learn more about building workflows, you can take a look at the next section Building Workflows, follow the steps in the Quickstart Guide, or check the video Workflows and Workflow Groups.

Building Workflows
To create a workflow, you need an empty workflow canvas. You can do any of these things:

- Select "Create new workflow" on the Welcome Page
- Navigate to File → New..., and select New KNIME Workflow.
- Click the leftmost icon in the toolbar
- Right click in the local workspace and select New KNIME Workflow.

A workflow is built by dragging nodes from the node repository to the workflow editor and connecting them. To add a node from the node repository or from the workflow coach to the workflow editor, you have two options shown in Adding a node into the workflow editor.
Cheat Sheet on Control Structures

https://www.knime.com/learning/cheatsheets
Taking a Proactive Approach to GDPR with KNIME

Phil Winters
Phil.Winters@knime.com

Anomaly Detection in Predictive Maintenance
Time Series Prediction, Training & Prediction without a class

Rosaria Silipo
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Iris Ails
Iris.Ails@knime.com
Phil Winters
Phil.Winters@knime.com

Emil, the Teacher Bot
WebPortal GUI, Text Processing, Machine Learning, and Active Learning

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Have one of your own? Email innovationnotes@knime.com
2019 – Guided Analytics & Automated ML Learnathon

Paolo Tamagnini
Data Scientist at KNIME
3w • Edited

Great event last night in Paris where we presented our first Guided Analytics Learnathon! Lots of good feedback! Thanks everyone for joining! Special thanks to Orange, Business & Decision and Paris Machine Learning Applications Group for co-hosting the event!

#eventing #analytics #meetup #machinelearning #guidedanalytics #knime #guidedautomation #autofl #automatedmachinelearning #mlautomation #datascience #datamining #dataviz

https://www.knime.com/learning/events
Blog Posts and Meetup Events

• We’d like to publish your KNIME stories on the KNIME Blog!
  • Contact Blog Editor heather.fyson@knime.com

• Meetup Event in your city?
  • Location, KNIME Expertise, Advertisement
  • mallika.bose@knime.com

• Next Meetup Events:
  • Nantes April 3
  • San Diego April 16
  • Utrecht April 17
  • Zurich May 23
Partner @KNIME

Paul Treichler – Partnerships
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partners@knime.com
Mission of the Partner Team at KNIME

Create a diverse global ecosystem of capable partners who leverage KNIME Software to solve customer problems with highly specialized knowledge across verticals and use cases.
How are we building the partner ecosystem?

• Quadrupling investment in partners for 2019

• Launching a new Partner Program with additional sales, marketing, and technical support for partners.

• Investing to enable the partners you care about

• Making the incredible work that people in this room are doing more visible outside of this room.

• Encouraging our customers to work with the many capable partners that we have invested in and that have invested in the KNIME ecosystem.
There are more than 40 partners at Summit including...
18 of them are exhibiting
5 partners are also co-presenting with customers
Spring 2018: New KNIME Forum
Spring 2018: New KNIME Forum

Workflow Example to add Current Date Column

Momdog998a

I would like to read in some fields from a Database Table and then add a column with the Current Execution Date. How can you combine these in a workflow so that I write to a new database table with these combined into the 1 table?

mlaubert71

You could create the current date and time and store that in a constant value column. There are further possibilities to use these functions. You have to make sure the Create Date&Time Range node is reset every time you need it (you could connect it with flow variables eg.).

https://forum.knime.org/file/55815/WorkflowExample-to-add-current-date-column-122860.png
### Spring 2018: New KNIME Forum

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<tr>
<th>Category</th>
<th>Topics</th>
<th>Latest</th>
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<tr>
<td>KNIME Analytics Platform</td>
<td>181 / month</td>
<td></td>
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<tr>
<td>KNIME Extensions</td>
<td>42 / month</td>
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<td>Community Extensions</td>
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<td>Partner Extensions</td>
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<td>KNIME Server</td>
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<tr>
<td>Special Interest Groups</td>
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<td>KNIME Development</td>
<td>23 / month</td>
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<tr>
<td>KNIME: Academic Alliance</td>
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</tbody>
</table>

- **KNIME Analytics Platform**: For discussions related to KNIME Analytics Platform
- **KNIME Extensions**: For discussions related to KNIME Extensions and Integrations
  - Text Processing
  - Scripting
  - Reporting
  - Image Processing
  - REST
  - Big Data
  - Deep Learning
- **Community Extensions**: For discussions related to extensions developed by the KNIME community
  - RDKit
  - Scripting Extensions
  - Indigo
  - Earlwood
  - HHCS Tools
  - Palladian and Selenium
  - CDD
  - OpenMS
  - Verma
  - Segan
- **Partner Extensions**: For discussions related to extensions developed by our KNIME partners
- **KNIME Server**: For discussions related to KNIME Server
- **Special Interest Groups**: For discussions related to various special interest groups
- **KNIME Development**: For discussions related to KNIME Development
- **KNIME: Academic Alliance**: For academic (education & research) discussions, if you are
Welcome to the KNIME Community Workflow Hub

The place to find and collaborate on KNIME workflows and nodes. Here you can find solutions for your data science questions.

How to Getting Started
From downloading through to building your first workflow

Forum Get help from our community and help others

Blog Intelligently Automating Machine Learning

https://hub.knime.com