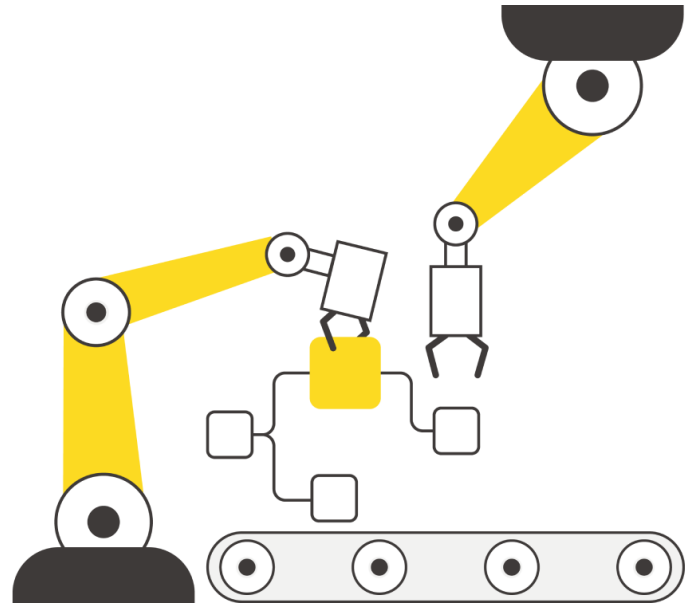


How to Build a Data Science Team for Resilient Manufacturing

Phil Winters, KNIME
& Guests

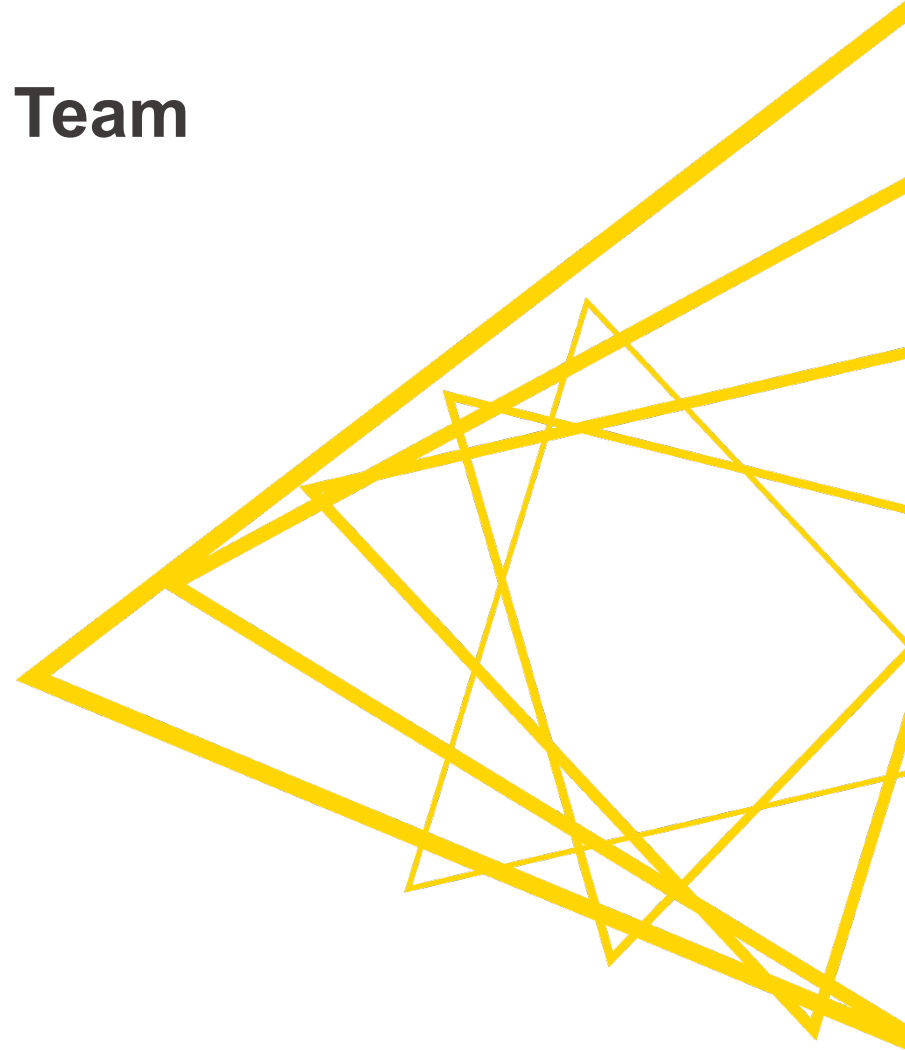
February 24, 2022



How to Build a Data Science Team for Resilient Manufacturing

Agenda

1. Meet the Experts
2. Resilient Manufacturing
3. Common Themes for Team Success
4. Q&A
5. Conclusions & Next Steps



Meet the Experts

- **Andreas Riess**
ZF Friedrichshafen

- **Daniel Wehner**
Fraunhofer Institute for Building Physics

- **Frank Heitkaemper**
Robert Bosch GmbH



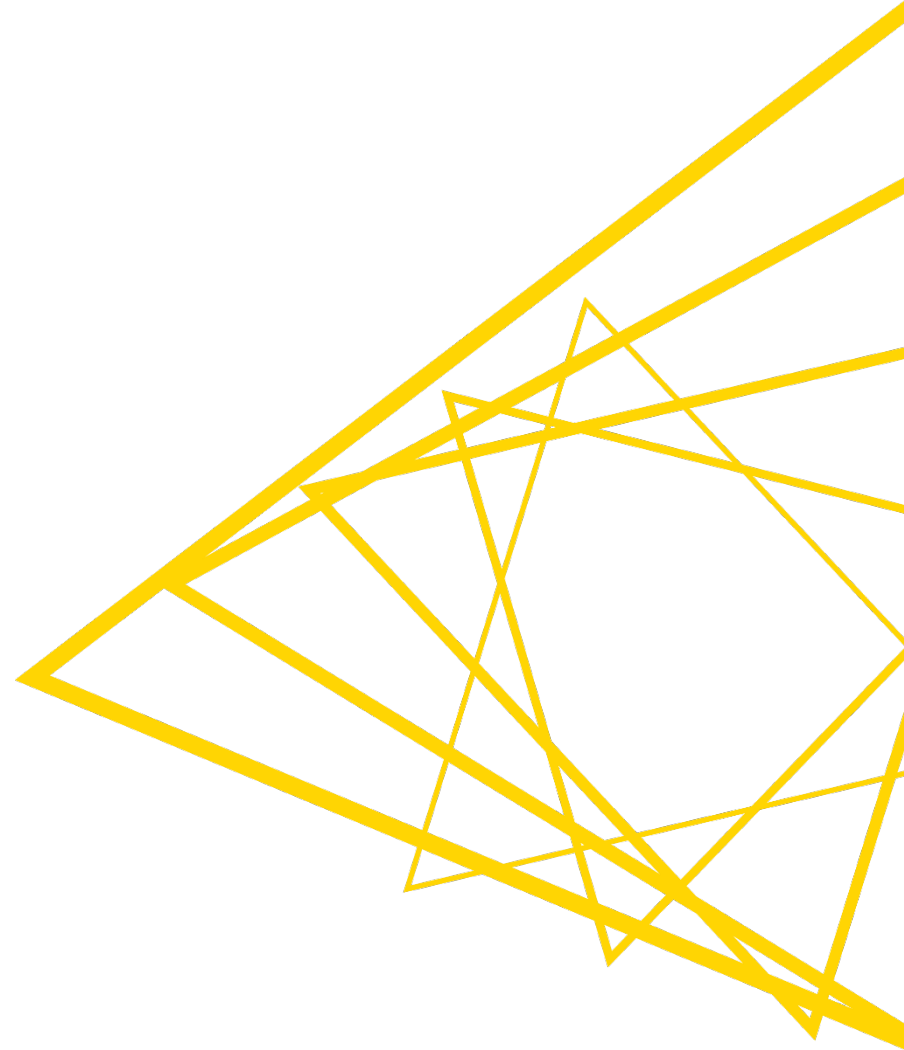
1. Meet the Experts

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3. Common Themes for Success

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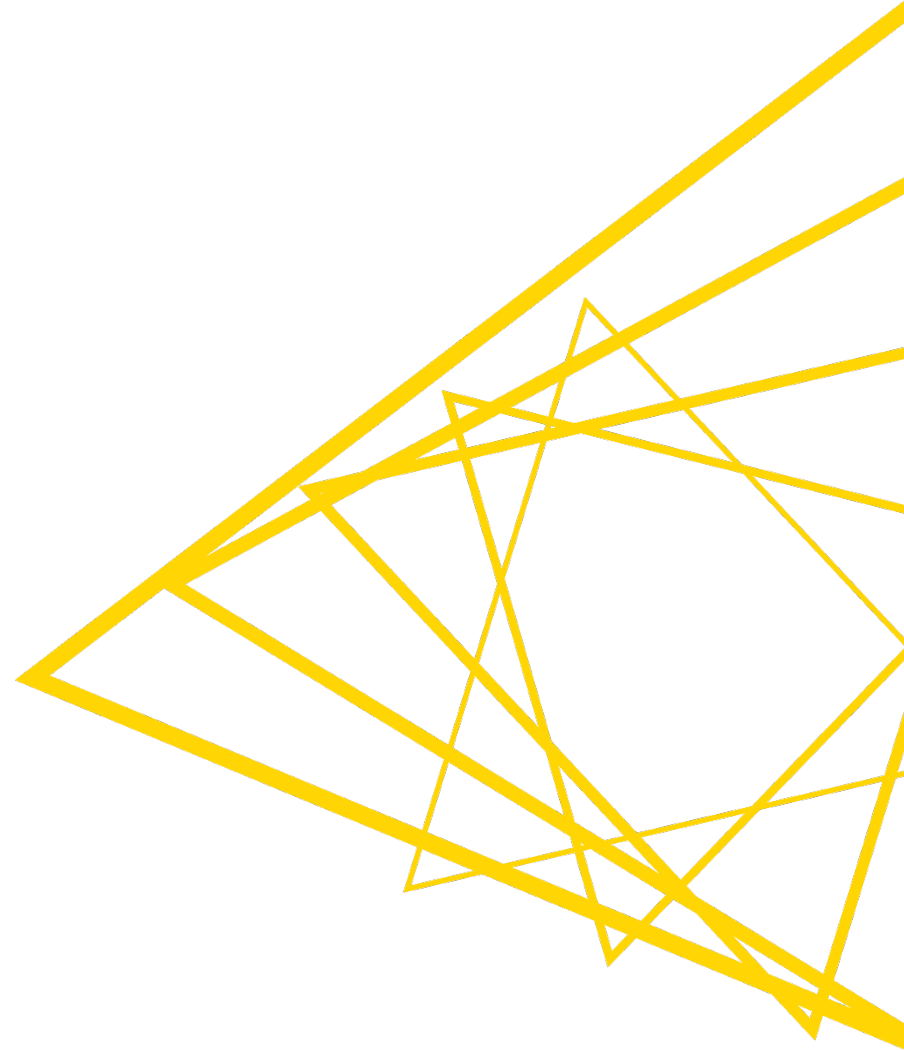
Resilient Manufacturing

“The ability to manufacture a constant quality at reasonable costs and production time despite disturbances and uncertainties.”



Need for Agility, Speed & Control

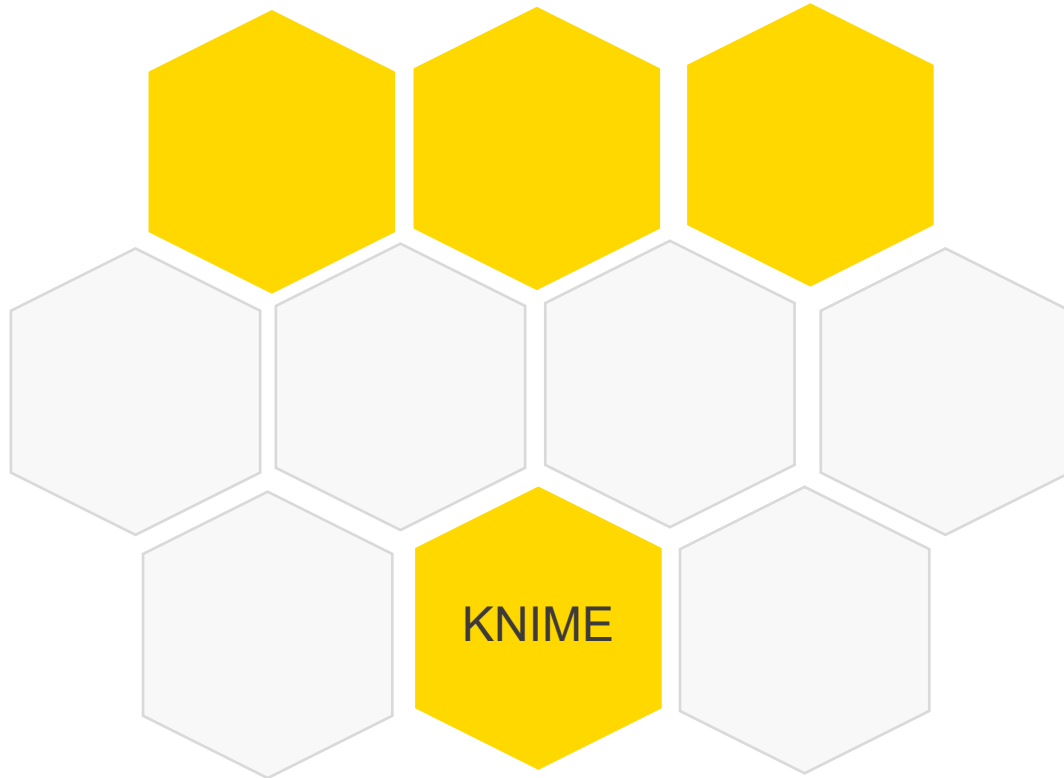
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Common Themes for Data Science Team Success



Common Themes for Data Science Team Success

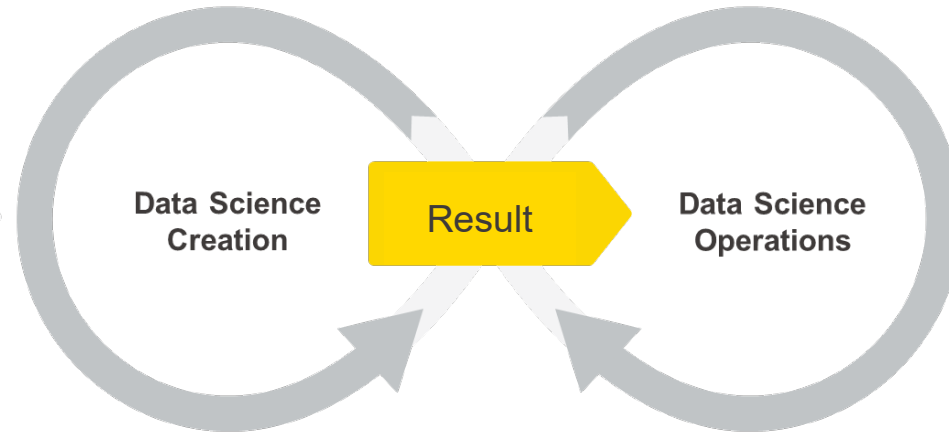


KNIME Approach – One Software Ecosystem



Result

KNIME Approach – One Software Ecosystem



KNIME Analytics Platform

For the individual to create
Open Source, no limits, free

KNIME
Extensions

KNIME
Integrations

Community
Extensions

Partner
Extensions

KNIME Server

For the enterprise to productionize
Compliments, Hybrid, Commercial

Team
Collaboration

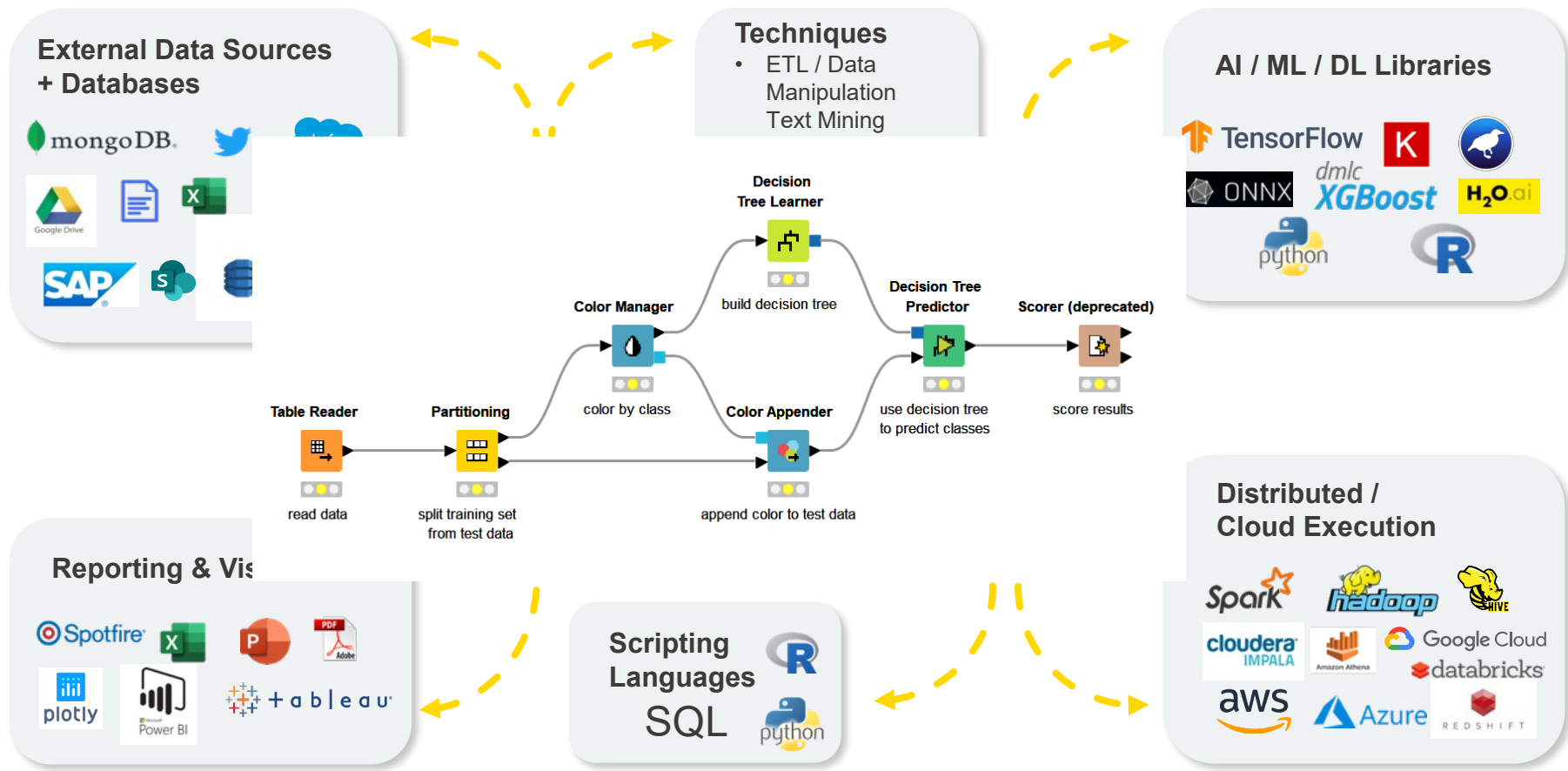
End User
Applications

API
Services

Managed
Execution

KNIME for the Individual: Visual Programming

+100 extensions, Low Code / No Code interface allows mix and match



Common Themes for Data Science Team Success



KNIME for the Individual: Sharing Expertise

KNIME HUB

Welcome to the **KNIME Hub**
Solutions for data science: find workflows, nodes and components, and collaborate in spaces.

Search workflows, nodes and more...

4 136 Nodes 701 Components 8 489 Workflows 219 Extensions

02_Hive_WritingToDB_Exercise

Verified Components
Highly reuse bundled functionalities, verified by KNIME Experts

Add to KNIME Analytics Platform
Drag node into the workbench of KNIME Analytics Platform 4.x

KNIME Forum

Open for Innovation **KNIME**
SOFTWARE / PRICING / COMMUNITY / LEARNING / PARTNERS / ABOUT

We're hiring! Search, find and apply to KNIME job opportunities in Austin, Berlin, Konstanz, and Zurich [HERE](#).

all categories | all tags | **Categories** | Latest | Top

Category	Topics	Latest
KNIME Analytics Platform For discussions related to KNIME Analytics Platform	302 / month	Wrong output format - Excel writer KNIME Analytics Platform - users, batch 0 6m
KNIME Extensions For discussions related to KNIME Extensions and Integrations	29 / month	row comparison KNIME Analytics Platform 43 42m

How to translate Chinese PDF documents to English ?
KNIME Extensions | Text Processing

KNIME Announcements
This category is used to announce new releases and important messages to the KNIME Community

Just KNIME !!
This category is for discussing solutions to the weekly "Just KNIME" challenges.

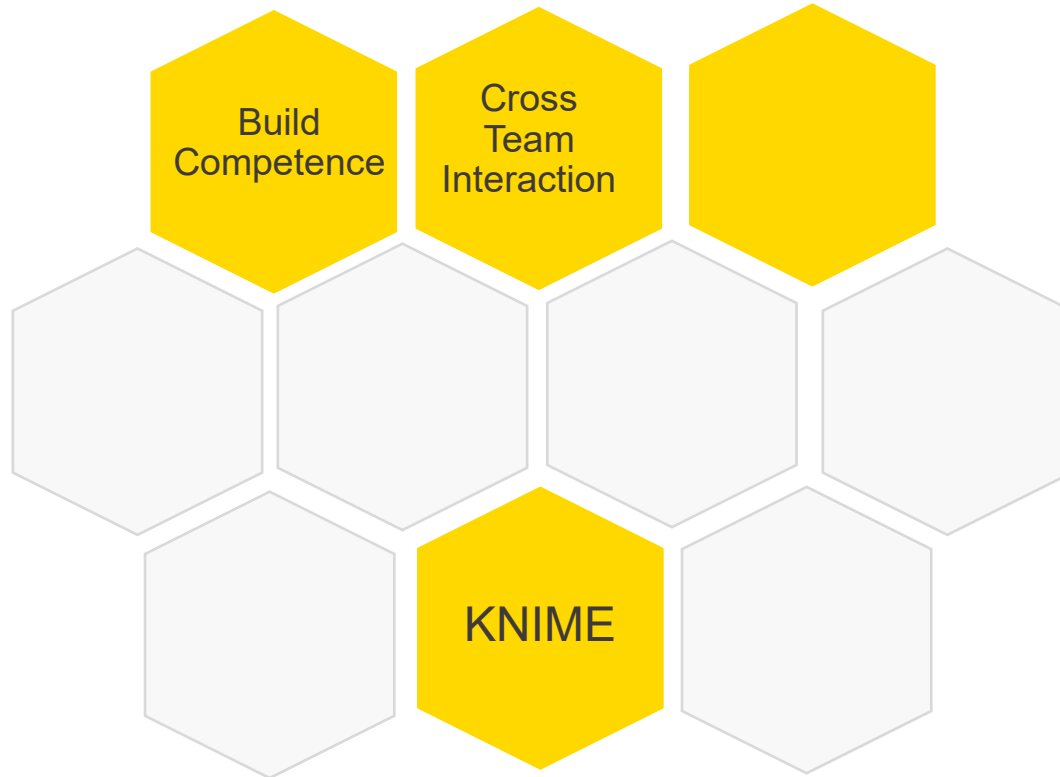
KNIME Resources
For information and discussion about further learning resources all around KNIME Software.

Community Extensions
For discussions related to extensions developed by the KNIME community

Discussion Thread:
michael19602016
Dear All,
I would like to translate one or more chinese (Patent) document(s) to preferably english using for example the amazon (or google) translate node. Therefore, I tried to input some documents using the PDF parser. Settings were: Stanford NLP ChineseTokenizer and Charset = ISO-2022-CN.
However, the node created a table, displaying the path of the input documents in the "Document" column, but no text appeared.
My question is: What do I have to do to "feed" the translation node properly proceeding from some PDF documents in chinese language in a certain folder?
Kind regards
Michael

Marten_Pfannenschmidt | KNIME Team Member
I assume you checked the "Use file path as title" box in configuration dialog of PDF Parser node. That is why the file path is included. If you want to make use of the text (which is stored within the document column) you can use the Document Data Extractor, or use the Text Processing nodes which can work with Document Columns.

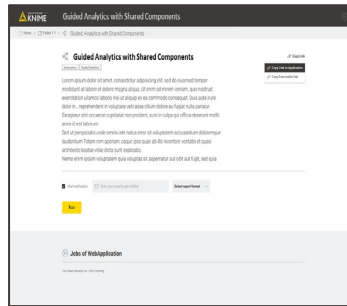
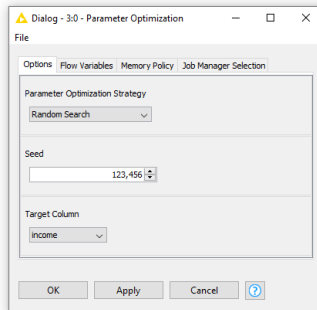
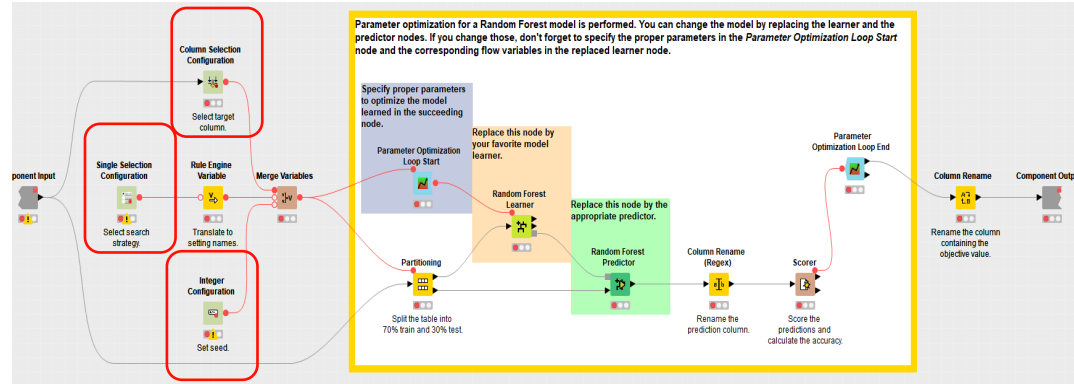
Common Themes for Data Science Team Success



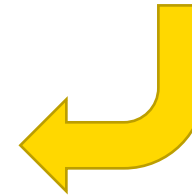
Cross Team Interaction

Capture & reuse IP ; Collaborate across disciplines and skill levels

Workflows
are self documenting



Parameter
Optimization



Components
build reusable assets from workflows

Cross Team Interaction

Sharable / Reusable / Instantiated for Collaborative Development

Database Specialists

Data Engineers

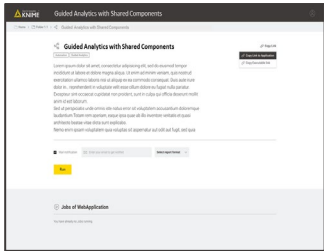
Python Specialists

Data Science Specialists

Visualization Specialists

Data Governance

Data Science / Analytic Generalists



As a web-based Data App or

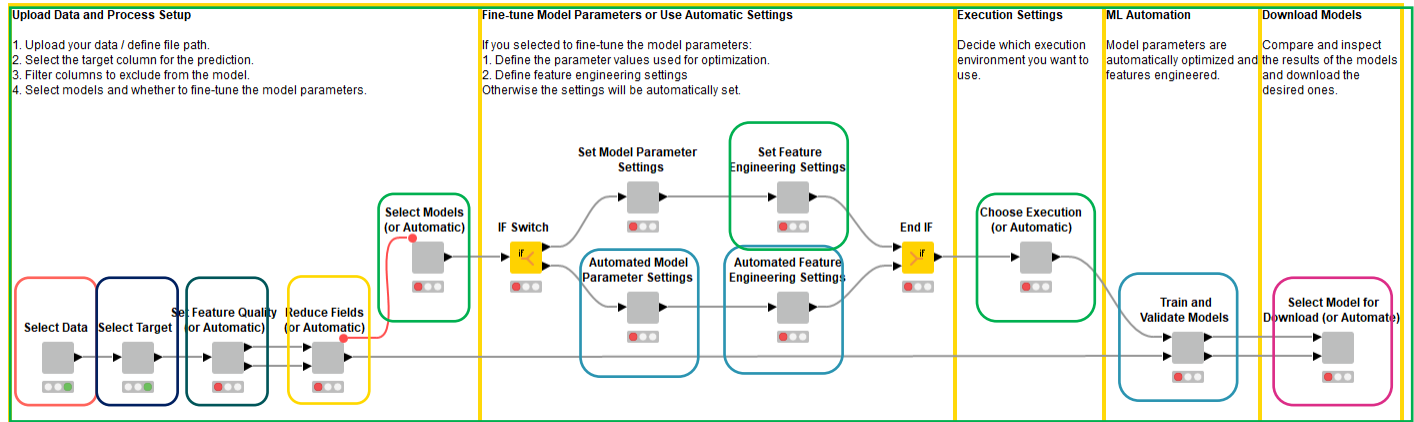


Guided Machine Learning



as a workflow (manual/automated)

or as an API

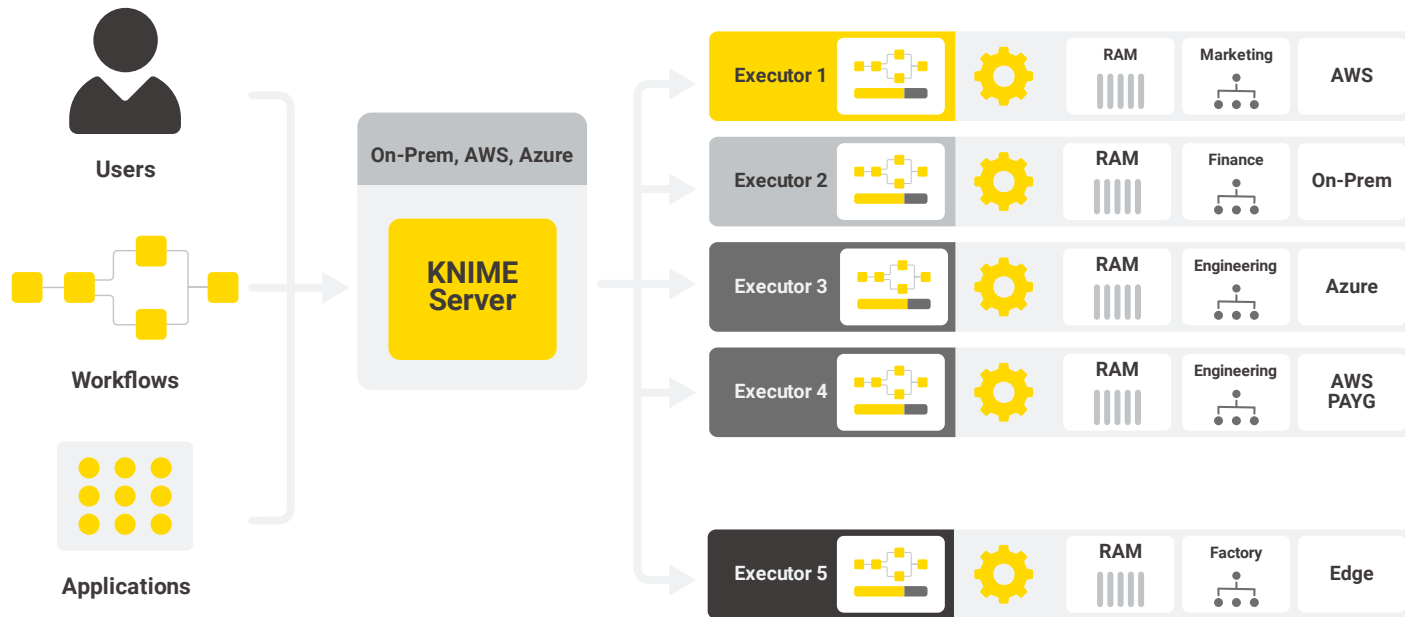


Common Themes for Data Science Team Success



IT Resource Flexibility

Scale Adaptively ; Control Costs



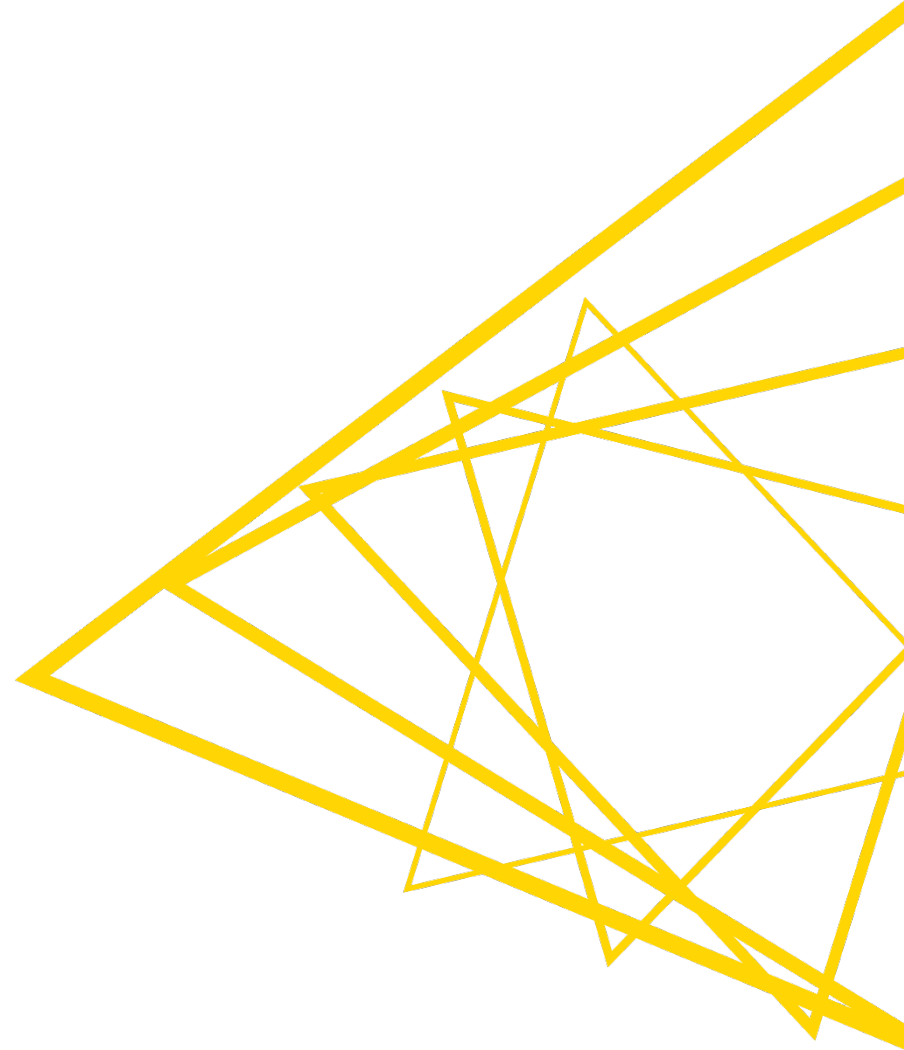
Mix & Match

- On Prem
- AWS & Azure
- Edge
- Mix & Match

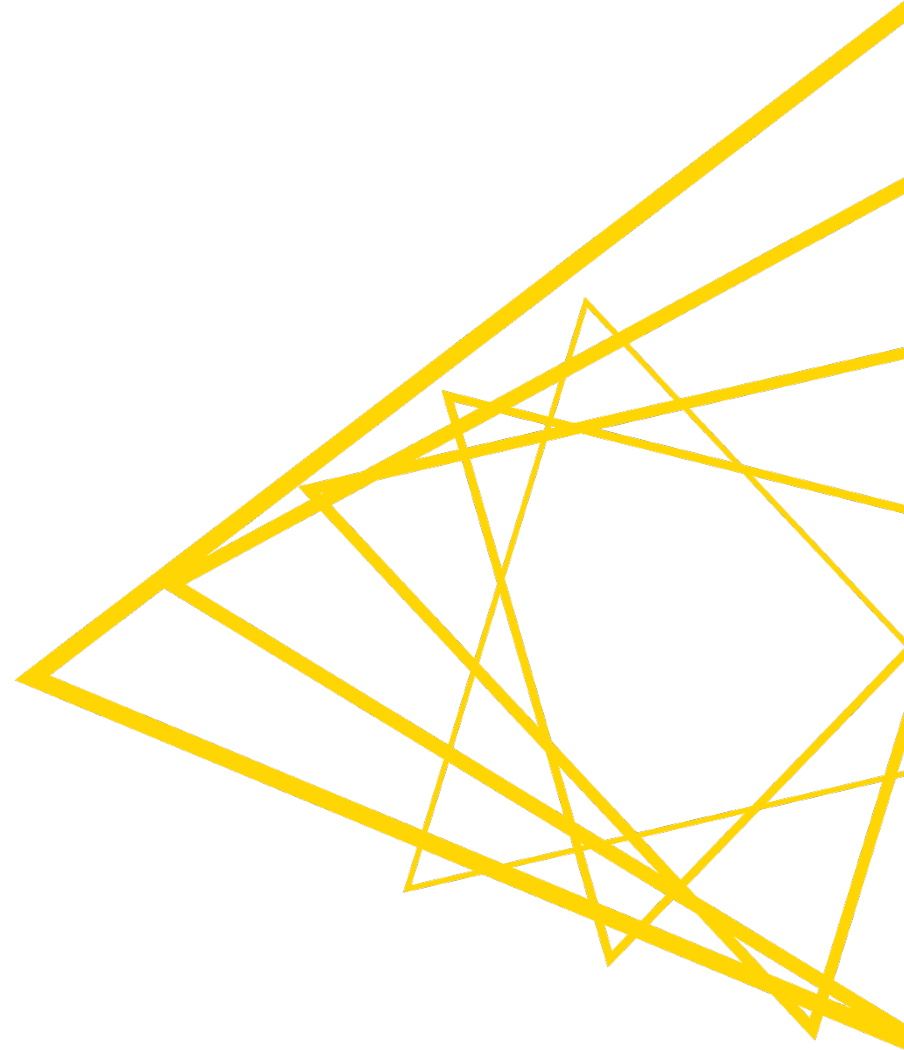
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Want to learn more?

The image shows a screenshot of the KNIME website. On the left, there is a dark sidebar with several navigation buttons: a KNIME logo icon, a home icon, a 'Reception' button, a video icon, a 'Stage' button, and a 'KNIME' button. A yellow arrow points to the 'KNIME' button. The main content area of the website has a white header with the KNIME logo and navigation links: Hub, Blog, Forum, Academia, Events, Solutions, Careers, Contact, and a search icon. Below the header are links for SOFTWARE, PRICING, COMMUNITY, LEARNING, PARTNERS, and ABOUT, along with 'Sign in' and 'Download' buttons. The main content area features a large hero section with a cityscape background, titled 'Manufacturing Analytics for Enterprises'. Below this is a section titled 'KNIME Powers Solutions for 1000s of Teams in R&D, Production and Supply Chain' with logos for SIEMENS, TATA STEEL, Continental, and DAIMLER. At the bottom, there is a quote: 'Manufacturing is always going to consist of hundreds of processes and will continue to...'

Click on the
KNIME button on
the left.

Mark Your Calendars

Moving into the Frequency Domain with the Fourier Transform

March 17, 2022

5 - 6 PM UTC +1 (Berlin)

[Register Now](#)



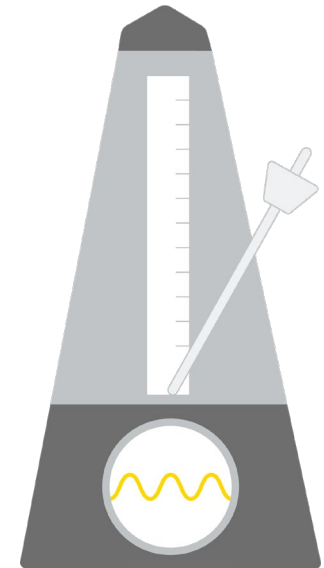
Corey Weisinger

Creator and instructor of *KNIME Time Series Analysis* course, author of the ebook, *Alteryx to KNIME*, and creator of the *KNIME Time Series Analysis* components.



Maarit Widmann

Teacher of the *Introduction to Time Series Analysis* course, co-author of the e-book, *From Modelling to Model Evaluation*, and author of a series of codeless blueprints for financial data analysis.



Upcoming Events Page
[knime.com/events](https://www.knime.com/events)

Interested in more?

- Email from Phil within the hour
 - Links to detailed information from our three experts
 - Links to many of the other topics we touched on
 - A way of getting in contact
- Slides and recording within 1 day

Let's Stay in Touch!

Hub hub.knime.com/

Forum forum.knime.com/

 linkedin.com/company/knime.com/

 twitter.com/knime

 youtube.com/user/KNIMETV

