

OS-Climate NLP demo using ODH services

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OS Climate

- Data and software to drive global investments toward green businesses
- Add real world impact to risk and reward parameters
- Decision making relies on data from different sources
- Aggregate, Standardize and Predict
- Keynote by Michael Tiemann, Marcel Hild, Erik Erlandson



Context

- Dataset: Climate reports in PDF format
 - o Commitments, carbon emissions, etc.
- Challenges
 - No standards followed in the reports
 - Finding information from them is cumbersome



Context

- Solution:
 - NLP model by the Allianz group in the OS climate community
- Pipelines:
 - OSC cluster: Openshift cluster created using Operate First principles
 - Open Data Hub services like Jupyterhub and Superset deployed



Environment Setup

- Repository: <u>aicoe-osc-demo</u>
- Data Science project template
- AlCoE CI pipeline



Notebook walkthrough

- Architecture diagram
- PDF text extraction
- Infer Relevance
- Infer KPI
- Results table



Pipeline

- Elyra UI
- Kubeflow page
- Results on s3 storage



Visualization

• Superset dashboard



Summary

We showed how to use ODH tools to create reproducible cloud native DS environment to develop notebooks and then create a pipeline that takes raw pdfs from s3, parses them, runs the NLP model, save the results on Trino and then visualize them using Superset.



Additional slides







