Operationalization of AI @ EU Commission



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Introduction

Operationalization of AI at EC & Maritime

Lessons Learned: Innovation through evolution

Q&A

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Al Outlier detection models for customs

Fully operational & Running in Production

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European Commission





How SAS Supports EC with AI models in Production



Outlier Detection for Anti-dumping and Sanctions

EU sanctions against Russia – restricted goods



Mission critical risks



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Implications



Undermining of sanctions effectiveness





Impacted EU global credibility



Trade Flow Intelligence

Select Origins 🔻	Select Chapters 🔻	Select Headings 🔻	Select Subheadings 🔻	Select Acceptance Date Interval 🔻

Structural Breaks - TARIC codes Structural Breaks - CN codes Structural Breaks - Subheadings

Click here for instructions

CN co	des 🔻	TARIC cod	es ▼				
Select a s	tructural break						
Origin	TARIC code	Month	Value (€)	Dif mo	ff. from prev. onth (€)	Divergence ratio	Strongly related measure
CN		Jun2017	3,059,078		-98,784,481	359.3	Yes
CN		Dec2016	68,034,252		68,034,252	274.1	No
CN		Jun2017	21,323,210		-62,777,151	232.5	No
CN		Sep2016	83,665,607		49,699,518	229.9	No
CN		Dec2016	0		-57,663,877	229.8	No
CN		Dec2016	0		-58,848,498	215.5	No
TR		Aug2011	10,225,894		-38,570,553	197.5	No
CN		Jun2011	78,028,417		44,477,583	168.5	No
CN		Jun2018	107,097,906		66,161,985	163.2	Yes
CN		Feb2017	83,269,106		40,464,752	153.1	Yes
CN		Sep2015	39,259,818		35,943,196	139.0	No
CN		Jun2015	40,853,349		22,649,925	122.5	No
KR		May2015	28,127,575		27,193,008	120.8	No
CN	210/00010	Nov2011	11,889,853		-22,033,424	114.1	Yes



Active filters

Origins: <No item selected> Chapters: <No item selected> Headings: <No item selected> Subheadings: <No item selected> CN codes: <No item selected> TARIC codes: <No item selected> Months: [Jan2011 , Dec2018]

Selected structural break Origin: CN TARIC code: 72 Month: Jun 2017

Related TARIC codes





Trade Flows

|--|

Select Chapters 🔻

Select Headings 🔻

Select Subheadings 🔻

Select Acceptance Date Interval 💌

Structural Breaks - TARIC codes Structural Breaks - CN codes Structural Breaks - Subheadings

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Selected structural break Origin: CN TARIC code: 77 Month: Jun2017

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Sas

Anti-Russian Circumventions

CircumventionReport





JRC collaboration

Model Verification and Insights





DETECT and RECOMMAND



Sense, Understand and ACT

- How did we fix it in the past?
- Why did it happen?
- When will it happen again?
- What can we do to prevent this in the future?



Al Outlier detection models for Maritime Surveillance

Fully operational & Running in Production

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Lloyd's List Intelligence













Lessons Learned

Innovation through evolution in the AI lifecycle



Trustworthy Data & Al Journey



- Data Catalog (Privacy, Bias, ..)
- Data Masking
- Data Lineage
- Automated Data Exploration

- Model Catalog (Fairness, Bias, Interpretability, ...)
- Low-Code/No-code & Code

Trustworthy AI Workflow

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• Model Monitoring & Governance

- Decision Accountability
- Model Cards





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Chat with your data

Submit your question





Trustworthy Data & Al Journey



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Trustworthy AI Workflow

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An AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment.

The EU AI Act

Model Cards

Secure ModelOps Processes

Nutrition label for your models

- Model Usage
- Data Summary
- Model Summary
- Model Audit

78	< Models	
8	Stent Failure Risk Project name: S	Stent (1.1)
j J	Model Card Files Variables	s Properties Versions
д. —	Overview	Stent Failure Risk 🕨
	Model usage	The purpose of this model is to classify whether for stent placement failure.
	Data summary	Model Health 🛛 🛆 Caution
	Model audit	Accuracy 💿 Fairness 🗊
	Tags: Health Stent Risk Score	MCE AUC Pass E01 Fail
	Contributors: Jim Box Allie DeLonay	TPR
	Responsible party: Smith HealthTech Inc.	Risk classification: Low Yes
	Data profile and analysis Model results Model risk Model lineage	

Credit Score Model

Version 1.1.2 Updated: 12/31/2020

Model Owner: James Carver Materiality: High Status: In production

Approved uses: Auto Credit Card

Last validation: Fit for purpose Last validation: June 2020 Next validation: Dec 2021

Assumptions: 3-month Libor < 0.05 unemployment (UNRATE) < 8%

Detail

- Training data
- Model History
- Network diagram

Ethical AI Report Card

The Credit Scoring model is used to estimate the riskiness of 1000s of loan applications. It applies advanced deep learning techniques that uses 500+ dimensions. It must constantly be reviewed for bias and compliance with the Fair Lending regulations. If this model is not properly cared for and used it has the potential to harm our company's earnings and hurt our reputation.

Ethics Rubric	
Risk Classification	High
AI Team Certified	Yes
Clients Impacted	+1,000
Explainable	Yes
Inputs	500+
Bias	No
Fairness	Yes
Concept Drift	No
Performance	Good
Monitoring frequency	Monthl y
Contingency plan	No
Human overridable	No
Recalibration policy	Yes

Model Wellness

Questions?

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Thank You

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