Intelligent Sharing of Explanation Experience by Users for Users

www.isee4xai.com

This project has received funding from the CHIST-ERA
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Our proposal to the XAI challenges

- Promoting the use of explanation strategies
- Capture, share and reuse explanation experiences
- Provide the AI community with an unifying open source platform
  - Underpinned by case-based reasoning (CBR)
  - Experiences of applying an explanation strategy to an ML task can be captured as cases and retained in a case base for future reuse.
- **Recommend** how best to explain ML predictions to other users in similar circumstances
- **User participatory approach**
  - Co-creation of explanation strategies between machine and users
  - Evaluation of the utility of the explanations
The key components
- Library of XAI strategies
- Ontology
  - Vocabulary and metrics to evaluate their acceptability and suitability
- Evaluation cockpit

Main challenges
1. XAI community engagement
   - Capture explanation best practices
2. Evaluation with human in the loop
   - User acceptance of XAI strategies
   - Construct explanations based on interactions
Belen Díaz Agudo, Juan A. Recio García, Luis Hernández Yáñez, Marta Caro Martínez
- Knowledge-based approaches in CBR, deep learning, transfer to platform development (jColibri and COLIBRI studio).
- Existing collaboration with the IAAA-MX research group in México that will provide use case 4 (Natural Event Detection) and Bosch Spain (use case 3)

Nirmalie Wiratunga, Anjana Wijekoon, David Corsar, Kyle Martin, Chamath Palihawadana, Ike
- Intent mining, Conversational digital behavioural change interventions in healthcare systems (use case 2)
- Initiative in the National Subsea Centre, where AI systems play an important role for Oil and Gas operations.

Derek Bridge
- Designing explanation strategies for CBR and recommender systems
- Interface between the communities involved in iSee with researchers in Ireland’s Insight Centre for Data Analytics

Anne Liret, Abdoulaye Fadiga, Bruno Fleisch (BT France), Dipankar Nath (BT Hungary)
- Responsible use of AI from an ethical and regulatory perspective
- Open Innovation ecosystem to help businesses in complying with obligations of explaining AI decisions.
- Existing research on use case 1 and 5 (Active learning in Telecom network operations & security incident management).
- User intent and impact modelling applied to explanation co-design
- Cyber defence research
Dr David Aha  
Director for the Navy Center of Applied Research in AI (NCARAI), USA

Dr Judith Masthoff  
Professor Human Centered Computing, University Utrecht

Dr Frances Brazier  
Professor Policy and Management, Multi-Actor Systems, Faculty of Technology, TU Delft, Netherland;

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Spain;

Abdoulaye Fadiga,
Head of Cyber Security
operations
BT France.

Mauricio Orozco
del Castillo, Chair
of the AAAIMX
Board;
iSee platform
  ▪ Ease the necessity of XAI as a service for society.
  ▪ Policy changes through evidence-based explanation best practices.

Results:
  ▪ Ontology and software objects
  ▪ Opportunity for XAI developers to include XAI strategies in iSee

Community engagement
  ▪ SICSA-XAI workshop (June) https://sites.google.com/view/sicsa-xai-workshop
  ▪ CBR-XAI workshop (September) https://gaia.fdi.ucm.es/events/xcbr/

Publications to Open science repository and standards
Create a European XAI compliance certification
iSee

www.isee4xai.com

Questions

iSee is an interactive toolbox for XAI with Case-based Reasoning at heart

You can interact with, experiment with, and evaluate iSee AI explanations to create...

iSee captures, shares and re-uses AI explanation experiences