The Brave New World of Analytics and AI
CeADAR
national centre for applied data analytics and machine intelligence

‘making the possible real’

edward.mcdonnell@ucd.ie
AI & Analytics everywhere
The 3 forces:
(1) datafication of everything

1% of data is captured and used [IBM]

90% of the world’s data was created in the last 2 years [IBM]

- social media e.g. tweets, blogs, emails ...
- books, web sites, corporate and legal documents, ...
- sensors in buildings, cars, utilities ...
- videos, images, audio, ...
- ‘smart cities’ and ‘smart spaces’
- citizen data e.g. population health records, census data
- mobile phones e.g. call, data logs, GPS, ...

What Happens in an Internet Minute?

Finding Big Benefits in Big Data

Companies are Using Big Data Analysis For:
CB Insights analysed earnings call transcripts:

“there's only one mega-trend out there that corporate execs are worried about and that's AI.”
Gartner: Data and Analytics predictions for 2021

- As the digital revolution gathers momentum data is taking its place as the core driver of business decisions.
- Over the next few years data analytics programmes will become even more mission critical throughout business and across industries.
- Big data: high-volume high-variety high-velocity will continue to increase rapidly in all 3 dimensions.
- It is clear that data and analytics are increasingly critical elements across most industries, business functions and IT disciplines.

Source: Gartner (June 2017)
Gartner: Data and Analytics predictions for 2021

AI is emerging as a core business and analytic competency.

Gartner believe this is just beginning a 75 year technology cycle that will have far-reaching implications for every industry.

Information itself is being recognised as a corporate asset (albeit not yet a balance sheet asset).
CeADAR is a market-led centre focussed on the development and deployment of data analytics technology and innovation to deliver value & competitive advantage to its member companies.
AI & ML & DL & DA

- Artificial Intelligence
- Machine Learning
- Deep Learning
- Data Science
intersection of data analytics, artificial intelligence, and machine learning
CeADAR: bridging the gap

University

• Basic research & technology creation
• Market push
• Technology driven

CeADAR

• Application development & proof of concept
• Business-value driven
• Market pull/need-driven

Enterprise

Product development and commercialisation

TRL 1 → TRL 2 → TRL 3 → TRL 4 → TRL 5 → TRL 6

Basic principles observed

TRL 7 → TRL 8 → TRL 9

System prototype demo’ed in operational environment

System proven through full commercial application
CeADAR services

- advisory
- bespoke solutions
- demonstrators
- business seminars
- collaborations
- workshops
CeADAR: how we operate

Two modes of engagement

• open innovation

• translational (contract) research
We develop analytics tools, techniques and technologies for better decision making

- **Applied R&D** exclusively directed at **industry challenges**
- **Senior** R&D staff (we don’t run PhD/MSc programmes)

- Approx. **8 demonstrators** delivered per year
- Demonstrator **rapid prototyping** delivered in 6 months
- **Demonstrators funded** from CeADAR core funds
- **No-charge trials** of existing CeADAR technologies
- Quick wins with **CeADAR’s extensive IP catalogue**
- machine learning
- deep learning
- predictive analytics
- text & sentiment analysis
- blockchain & smart contracts
- time-series analytics
- real-time analytics
- contact centre analytics
- customer analytics
- location-based analytics
- preventative maintenance
- video & image analytics
Selected DIHs
Geographical coverage

- DFKI
- VDTC (Fraunhofer IFF)
- Munich Innovation Hub for Applied AI
- CeADAR
- DIGIHALL
- IMEC
- Images et réseaux
- Tevalab
- AIRans
- ITI Data Cycle Hub
- euHPC
- PRODUTECH
- RIF BioRobotics Institute
- Area Science Park
- DIH Lombardia
- nZEB Smart Home
- FCAI
- Super IoT
- SmartIC
- LTCoboticsDIH
- HPC4Poland
- PIAP HUB
- Czech Institute of Informatics, Robotics and Cybernetics
- DIH Slovenia
- Knowe-Center GmbH
- CROBOHUB
hot topics in DA & AI

- machine learning
- deep learning
- predictive analytics
- real-time analytics
- time-series analytics
- text & sentiment analysis
- video & image analytics
- Blockchain/smart contracts
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