Ten Years of Turing – a *personal* retrospective

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(image of me before 10 years at turing☺

Incept date for ***me*** July 2014

- Early intelligence about call….various weird things become apparent
  - Data science (aka Big Data) (not AI just yet, but ML:-)
  - Real location v. random choice of partner inst.
    - Strongly forcing cooperation between some competitors
    - But not really able to control their behaviour as £ incentives too small
    - So incentives mostly reputational
  - PhD program & Fellow Model
    - Binding by uni billing odd (compared to CDT+program grant)
    - No real long term assured funding (5 year review – see later)
    - Not really like any other national institute I'd recognize…
  - Industry interest – much (and v. helpful)

What skills do we actually have?

- Pre-actual opening of inst., many meetings
  - To see what we had in the 5 founders…
  - To get to know one another
  - To have meetings coz that looks like work to funders

  - Data Wranglers
    - 90% effort -> early ideas for REG
  - Data Lakes
    - provided by partners with problems

  - Note most partners held back some areas (e.g Cambridge health)
  - Some obvious institutes declined to be partners (e.g. Imperial)

What are the baby steps and obstacles

- My first role (in “program cttee” = prototype of science exec)
  - Landscape mapping
  - 50 years of Data Science, David Donoho

    https://courses.csail.mit.edu/18.337/2015/docs/50YearsDataScience.pdf

  My first year’s reading (since I knew nearly zero about AI):-

    https://www.cl.cam.ac.uk/~jac22/jons-turing-bib.txt

- Big data/AI names on board from partners
- Creating REG (and TPS, and Turing Way etc) innovation!

- Against the UKRI broken “partnership” model
  - Initial setup daft – exclusive, and fragmented at same time!
  - 5 year review, 2 years late
  - Report (and informal feedback) badly ambiguous
  - Noisy side channels from government undermining research independence

What could have been done differently

- Not be central (in London) & be fully inclusive from day 1
- Actually have own building,
  - use uni (extensive) resources to provide management/admin
  - Not get fed money in dribs and drabs
    - Or unmanageably big drabs (ASG)
  - Have some compute (i.e. be a lab too)
- Public policy
- Proper advisory board
- Long term funding like e.g.
  - MPI, INRIA, IMDEA, CNR (let alone CERN etc)

A few (of many) highlights

- DSG e.g. locating jammers in GSMA cellular data
- TRE design/advice
- Φ-ML & CIIG seminars (amongst many great interest groups)
- See also causal inferencing/bayes, public seminars, youtube channel
- Social media analytics for politics, strife, mental health
- Edinburgh denied chance to do first LLM a decade ago
  - due to “cost of storage” - a few terabytes of the common crawl
- Counterfactuals and ethics, pints of science
- t0 lean language models, D&S LLM poisoning, Aardvaak Weather Prediction
- <add yours here>

What next?

- ~~Muddle along re~~-building along 4 grand challenges, missions etc
- Why only 4?
  - There's (always was) demand (e.g. from finance and others) and
  - UK strengths in other areas and gaps in the research community
  - Some level of growth is a sign of life ☺
  - Expectations (MPI and INRIA have existed for 5 decades+)

- Convening power is v. good for data & phd intern & data study grps
- Speak truth to power
  - e.g. data center growth in uk is environmentally unacceptable.
  - Autonomous weapons are unethical.

Why should you care?

- The UK has been a leader in AI since 5 decades ago
  - The University and National support is a major factor
- Much of our science is a beneficiary
  - Data and code and seminars/classes on the net
  - E.g. LHC/CERN, Genome, dare I say AI
- Government, nay, everyone needs better advice
  - Still think they need to upgrade grid (LLMs ☹) etc
  - Science based policy
- AI Based Science
- Science Based AI!!

Questions…..or Pub…?