
Predictive analytics and the future of law and regulation
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Data analytics and AI for regulation

- Benefits
  - Improved efficiency
  - Reduced costs
  - Greater responsiveness
  - Enhanced safety and security

Controversial uses

- Criminal sentencing
- Health and welfare fraud detection (Robodebt)
- Child abuse and neglect monitoring (false positives)
- Predictive policing

Types of algorithms and rules and their interactions

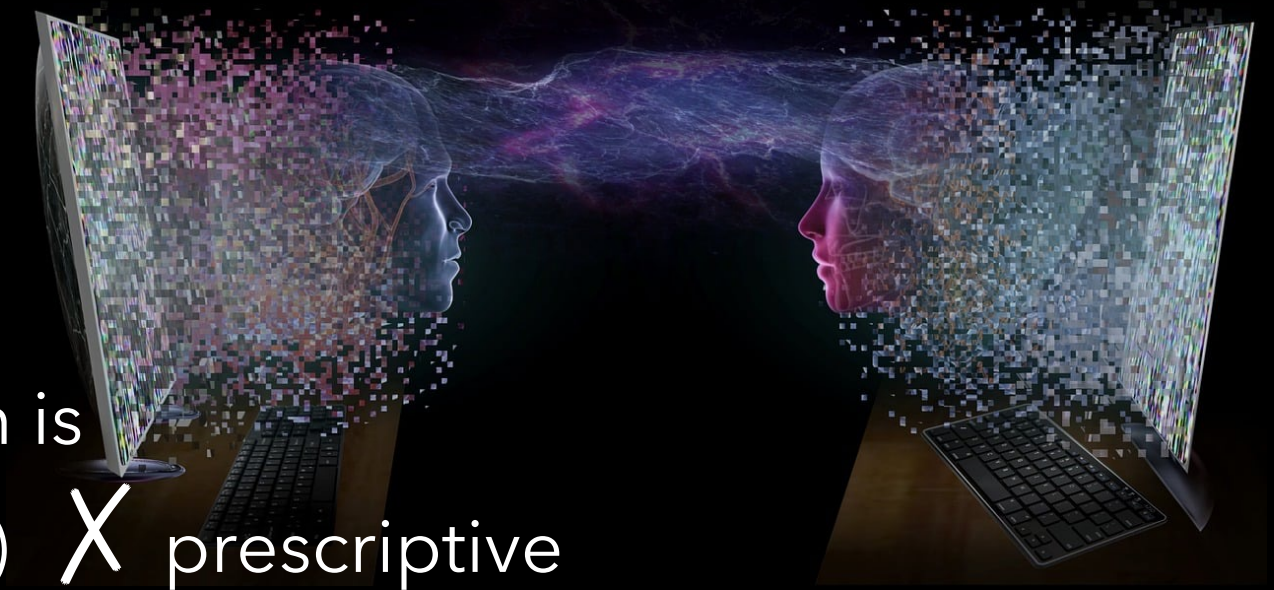
- Descriptive (**is**)
- Predictive (might or **will be**)
- Prescriptive (**ought**)
- Normative (**ought or else**)

Technical viewpoint

- Types of data analytics
  - Descriptive (What is?)
  - Diagnostic (Why it is?)
  - Predictive (What might or will be?)
  - Prescriptive (What should be?)
- Logical, chronological and linear

Legal and policy perspective

- Relations and interactions are not neat or simple
- 3 major concerns or critiques



- Is-ought problem (David Hume)
- No ought from is
- Descriptive (is) ✗ prescriptive (ought)

- Either
  - Cannot use predictive analytics for regulation
  - Transparency about explicit or implicit goals and values (oughts)

1 Hume's law

2 Moore's law

- 'the number of transistors on an integrated circuit will double every two years with minimal rise in cost' (Gordon Moore)
- Descriptive, predictive and prescriptive rule **all-in-one**
- Blurred distinction and overlapping
- Self-fulfilling prophecy (human element)

- Norm or social norm – ‘generally accepted, sanctioned prescriptions for, or prohibitions against, others’ behaviour…, i.e. what others *ought* to do . . . or *else*’ (Richard Morris)
- ‘Or else’ – involves sanctions or inducements of some kind

3 Normative rules

3 Normative rules

- Law as more formal norms
- Prescriptive (ought) ≠ Normative (ought or else)

Normative rules – driving

- Speeding is the top cause of car accidents (descriptive)
- Driving faster will increase the risk and probability of accidents (predictive)

Normative rules – driving

- You should not drive over the speed limit to prevent accidents (prescriptive)
- You should not drive over the speed limit because (normative)
  - It is not socially acceptable behaviour or
  - You will be fined or penalised

Summary

- Use of data analytics and AI in regulation poses significant challenges and concerns
- Understand different types of algorithms and rules and their interactions
- Be mindful of underlying interests and values, human element or agency, and significance of normative rules


End

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