Data-driven hiring, labour relations and social justice

Javier Sanchez-Monedero
sanchez-monederoj@cardiff.ac.uk / @javisamo
Cardiff University, UK
Data Justice Lab @DataJusticeLab
The datafication of the workplace

- Novel and heterogeneous data sources
- Predictive modelling
- Transformation in standard employment:
  - Surveillance
  - Management
  - Human Resources
  - ...

Hiring

- **Sourcing** (job description and advertising)
- Candidate **screening** and ranking
- Automated **interviews** and **assessment**
- **Selection**
- **Scheduling** and activity forecasting

**Technology**: audience segmentation, sentiment and personality classification, problem-solving tests, chatbots...

Augmented candidate profile

• Audience segmentation (skills, interests, demographics...)
• Predictive tools (turnover risk...)
• Emotional AI

Jay Walker
Senior Product Designer @ Acme
San Francisco • 8 Years Total Experience • University

12527 words analyzed: Very Strong Analysis

- Agreeableness:
  - Average for this role: 92%
  - For Paul: 92%

- Introversion/Extraversion:
  - Average for this role: 91%
  - For Paul: 91%

- Conscientiousness:

MORE LIKELY TO MOVE
- Turnover rate at Acme for the past 12 months is 6%
Candidate (pre) assessment

Common steps:
1. Data extraction and profiling
2. Candidate scoring and comparison with ‘best’ or ‘ideal’ performers in a role.

Image Credit: Pymetrics
Issues
• Information asymmetry
• Dehumanization
• Privacy
• Non-US sociolegal contexts
• Automation of bias and discrimination
  • Discriminatory ads placement
  • Different accuracy for underrepresented groups
  • …

Bias mitigation claims
• Some companies claim to mitigate discrimination in hiring though technological means
• What does this means in technological, social and legal terms?
Understanding of fairness by automated hiring companies

- **US-centric approach:**
  - Disparate treatment and disparate impact
  - Definition of protected groups
  - 4/5th rule (demographic parity)
  - Data protection laws and (not) right to explanation

- **Technological fixes:** (1) anti-classification; (2) classification parity; and (3) calibration;
Discussing fairness claims in the European context

- **Lack of information** for external and independent auditing:
  - Actual data, code, mathematical models and documentation
  - Real customers use cases and design assumptions
  - Abstract definitions of fairness and discrimination
- Ongoing discussions about **statistical definitions of fairness**
- **Inherent limitations** of data-driven hiring
- Problems associated with the definition of ‘best’ employees
- **Group** definition and identification, intersectionality and protected attributes
- Transfer of tools within a **US socio-legal context** to the context of UK/EU