Language Technology: Research and Development

Author Identification and Profiling

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UPPSALA
UNIVERSITET

Mats Dahllöf

mats.dahllof@lingfil.uu.se

Department of Linguistics and Philology

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Author Identification/Profiling

- **Who has written a text?** … in a set of given individuals? What kind of data do we have?

- **How many authors?** … for a (set of) document(s)?

  How do pieces connect to individuals?

- **What kind of person has written a (set of) document(s)?**

  Age, gender, personality, mental health, economy, etc.

- **An "authentic" user at all?** Or a "paid opinion manipulation troll".

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Motivation

- Authorship issues in e.g. history and literature. (Shakespeare, The Federalist Papers, Elena Ferrante.) (Digital Philology course.)

- Forensic investigation.

- Psychiatric diagnosis and pedagogical assessment.

- Targeting people in marketing or political campaigning through social media (digital mass persuasion).

- Social media quality and security.

Approaches

- Human work on author identification is an infrequent and often ad hoc activity. It is also difficult to validate. There are computer-aided approaches.

  Who writes the `@realDonaldTrump` tweets?

  varianceexplained.org/r/trump-tweets/ (David Robinson 2016)

- Problems clearly inviting ML solutions.

- Ordinary supervised classification possible for some data sets.

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Challenges and questions

(Easiest scenarios: Comparison of fairly long documents based on large amounts of homogenous labelled data.)

- Small document samples.

- Cross-genre, cross-domain, cross-language, etc. comparison. (Content vs style.)

- Which features correlate with which personal traits?

- Finding data. Ethics?
  (Cf. "Facebook-Cambridge Analytica data scandal".)

Seminar 1

Overview of the Author Identification Task at PAN-2018 Cross-domain Authorship Attribution and Style Change Detection.

Authorship attribution for social media forensics.

Seminar 2

Predicting age and gender in online social networks.

Automatic personality assessment through social media language.

Screening Internet forum participants for depression symptoms by assembling and enhancing multiple NLP methods.

Seminar 3

Blogs, Twitter Feeds, and Reddit Comments: Cross-domain Authorship Attribution.

Stylometric Inquiry into Hyperpartisan and Fake News.

Studying User Income through Language, Behaviour and Affect in Social Media.