RSDD-Time: Temporal Annotation of Self-Reported Mental Health Diagnoses

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Problem Statement

- Temporal information is important to understand self-reported depression diagnosis statements in online forums
- We provide a **dataset and benchmarks for temporal annotation** of self-reported diagnosis statements based on RSDD

> *Back when I was 14, I was diagnosed with major depression. They gave me all these meds, but nothing really worked. Now I am 24 and feel worse than ever.*

- Dataset available with DUA at http://ir.cs.georgetown.edu/resources/

Annotation Scheme

- **Self-reported diagnosis statement**
  Where the user states his or her diagnosis

  > *Back when I was 14, **I was diagnosed** with…*

  > *He **diagnosed me with depression**, but I…*

- **Diagnosis time**
  Temporal expression indicating when the diagnosis was made

  > *Back **when I was 14**, I was diagnosed with…*

  > *I was diagnosed with depression **in 2008**.*

- **Diagnosis in doubt**
  Does the user believe the diagnosis?

  > *He diagnosed me with depression, but I never really believed it.*

- **Diagnosis recency**
  How recent was the diagnosis?
  – Very recently (up to 2 months ago)
  – More than 2 months, up to 1 year
  – More than 1 year ago, up to 4 years
  – More than 3 years ago
  – Unspecified
  – Unspecified, but not recent

- **Condition state**
  Is the condition current?
  – Current (and "probably" current)
  – Unknown
  – Past (and "probably" past)

- **False positive**
  Indication of whether the diagnosis statement is real

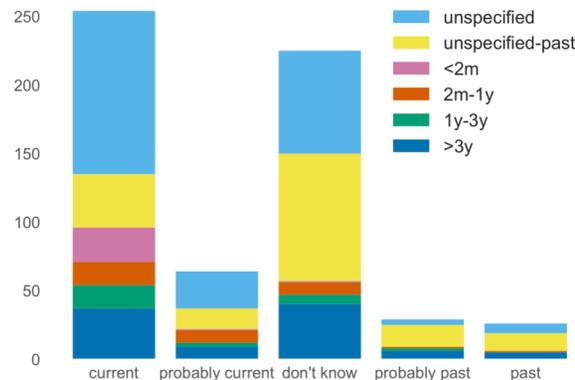 > *My friend told me, "I was diagnosed with depression."*

Dataset Characteristics

Attribute	Count
false positive	25 out of 598
diagnosis in doubt	16 out of remaining 573
condition state	current (254), prob. current (64), unknown (225), prob. past (29), past (26)
diagnosis recency	unspec. (232), unspec. but past (176), recent (27), >2m-1y (37), >1y-3y (29), >3y (97)
time expression	explicit (144), inferable from age (101), non-inferable (47), n/a (306)

598 posts were annotated. See above for distribution of attributes.

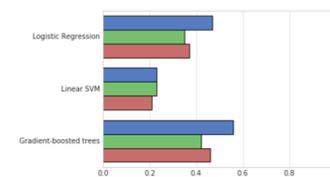| Span	Attribute	%	κ
diagnosis	false positive	0.97	0.43
	diagnosis in doubt	0.97	0.22
	condition state	0.52	0.41
	diagnosis recency	0.66	0.64
time	explicit	0.91	0.81
	inferable from age	0.93	0.82

All posts were annotated by at least two annotators. An additional annotator was used for resolving disagreements.
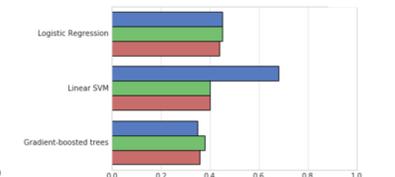

Distribution of posts by diagnosis recency and condition state.

Baselines

Diagnosis recency   ### Condition state

Diagnosis time span extraction

Modified SUTime for this task by adding rules for age expressions, and using heuristic to pick the date expression closest to the diagnosis statement.