

The slide features a central white diamond shape on a light gray background. The background is decorated with overlapping geometric shapes in yellow and blue. The text is centered within the white diamond.

# Assignment No 1 Corpus Creation

## **Group Members:**

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# Motivation and Corpus

- **Motivation:**

- Emotion Analysis as a regression problem.
- Fine-grained analysis using Valence-Arousal-Dominance(VAD) model.
- Bi-representational: mapping possible between categorical basic emotions and dimensional VAD model.
- VAD can provide more information than basic emotions.

- **Corpus:**

- Randomly sampled 50 tweets from SSEC Corpus.
- Tweets already labeled with stance, sentiment and emotion.
- Can be helpful for analysis later.

# Annotation Guidelines / Task Specifications.

- Given 4 tweets, select best and worst tweet for each property of interest (Valence, Arousal, Dominance).
- **Questions to ask:**
  - **Valence:** Is it positive or negative emotion ?
  - **Arousal:** How exciting / calming is the emotion ? e.g. despise have high arousal than hate.
  - **Dominance:** Is the emotion controlling and dominant in nature ? e.g. anger have high dominance.
- Annotate Writer's Emotion.
- If all tweets are negative, select the least negative for positive valence.
- Similarly for arousal and dominance.

# Annotation Environment

Item1	Item2	Item3	Item4	Valence BestItem	Valence WorstItem
<p>If Greek Prime Minister Alexis Tsipras needs advice on emerging from bankruptcy, I'm available #greekreferendum #SemST</p>	<p>A prochoice advocate but circumcise ur baby? Fucking hypocrite! #circumcision #humanrights #SemST</p>	<p>@people @KimKardashian I dont even have to read this 2 know who she would want 4 the next president. #Killary #SemST</p>	<p>Liberalism is the politics of personal destruction! If Liberals can't win- they will lie &amp; demonize! They are paid to attack! #SemST</p>	1	2
<p>@RNRLouisiana @willie_mays24 @RNROklahoma THIS kind of open defiance is what is needed but on a massive scale <u>#tcot #LNYHBT #SemST</u></p>	<p>The teen pregnancy rate has declined 51 percent, and the teen birth rate is down 57 percent. #SemST</p>	<p>Everyone quick, feminists are a minority now! lol #SemST</p>	<p>I still cannot get over how much women are degraded in media, sports, and the business world simply because of who we are #SemST</p>	2	3

# Best–Worst Scaling

- It's difficult to be consistent while assigning real values.
- A tuple of 4 tweets as one instance.
- Select best and worst tweet for each property of interest.
- Conditions for tuple:
  - $2 * N$  (No of tweets:  $N = 50$ ) distinct tuple produced.
  - Each tweet is in 8 tuples and no pair of tweets in more than one tuple.
- Score for single tweet.  $[-1, 1]$   
$$\text{Score}(\text{tweet}) = \% \text{selected\_best}(\text{tweet}) - \% \text{selected\_worst}(\text{tweet})$$

# Split-half reliability

- If results are reproducible, then scores might be accurate.
- Split-half reliability (SHR) gives us degree of consistency.
  - Annotations for tuples splitted randomly into two halves.
  - Scores produced using best-worst scaling for both halves independently.
  - Correlation is calculated between two set of scores.
- If consistent annotations then correlation is high.
- Spearman correlation is reported.

# Results

- Annotations from both annotators are combined before applying split half reliability.
- Most consistent while annotating valence and least consistent annotating dominance.

Spearman Correlation			
	Valence	Arousal	Dominance
Combined	0.8313	0.7579	0.7252

- Scores representative of the decision made during annotations.

Tweets	Valence
O @kaitlynbristowe YOU GET YOURS GIRL. #TheBachelorette #SemST	0.812
#Questiontime Who is more likely to solve problems related to #poverty #sustainability & #government? #religion? #business? #SemST	0.18
A prochoice advocate but circumcise ur baby? Fucking hypocrite! #circumcision #humanrights	-0.875

# Results

- Contrast in annotation found between annotators.

Valence Score	
Wouldn't be surprise that it comes to light that Chelsea's husband cheats on her like her Bill did on Hillary.	
Annotator 1	-0.75
Annotator 2	0
Combined	-0.375

- Possible reasons for Annotator 2 assigning zero value.
  - Tweet was never annotated as either best or worse.
  - Tweet was assigned negative in some annotations but the score was set to zero when tweet was selected as most positive tweet among all negative tweets.



# References

- Schuff, H., Barnes, J., Mohme, J., Padó, S. & Klinger, R.(2017) Annotation, Modelling and Analysis of Fine-Grained Emotions on a Stance and Sentiment Detection Corpus.
- Mohammad, S. & Bravo-Marquez, F.(2017) WASSA-2017 Shared Task on Emotion Intensity

**Thank you for listening.**