

졸업작품

5조

2021.09.30

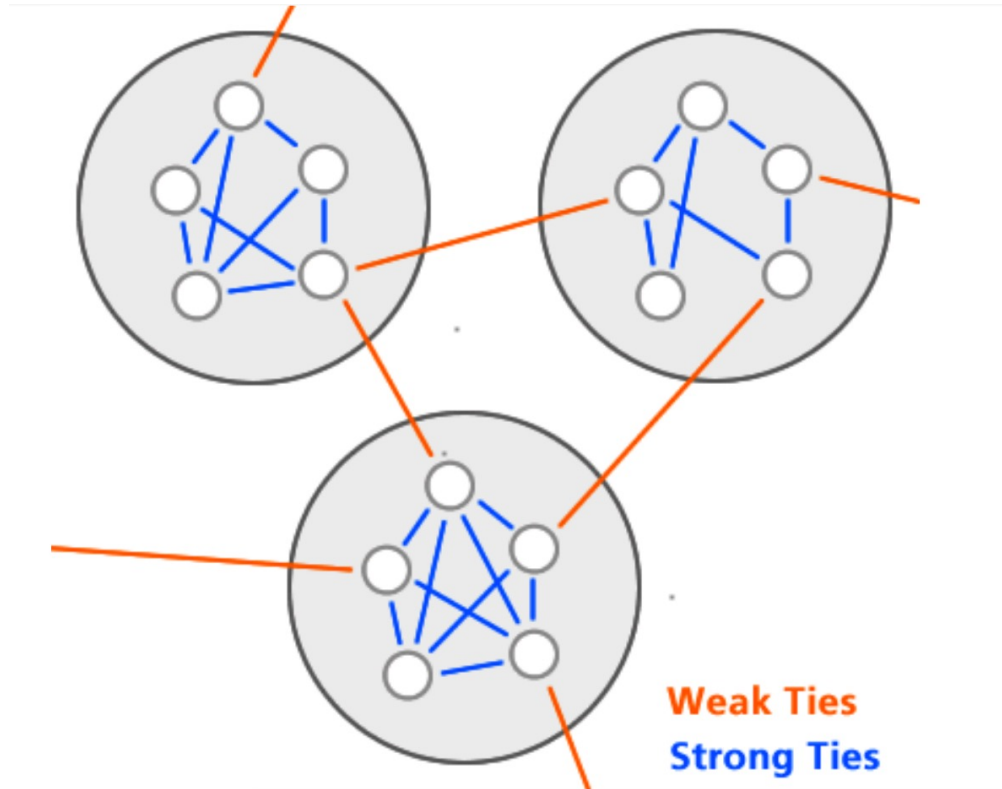
201935006 고효진
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Topics

- 1) Data extraction
- 2) Methods
- 3) Appendix: call .py from .java

Data extraction

:Tie strength



Weak Ties

: Those edges that occur among nodes belonging to different communities.

Strong Ties

: Those edges occurring among nodes in the same community

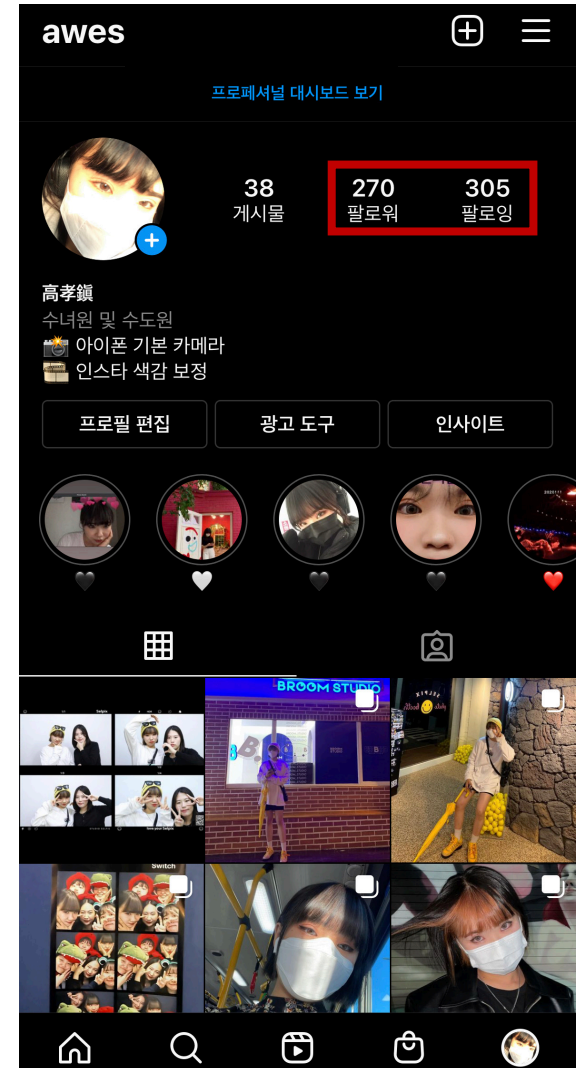
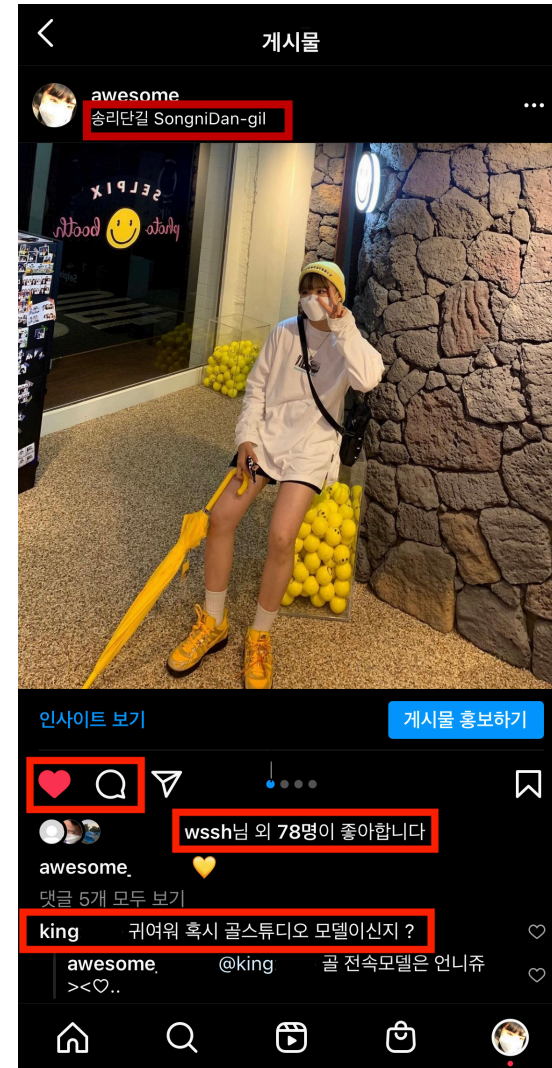
Intensity, Intimacy, Duration, Reciprocal services, Structural, emotional support, Social distance

Data extraction

: Tie strength

Similarity

: Location Preferences, hidden relationship between users



Data extraction

:Tie strength

Capture the relationship strength between two users and its influence

Tie Strength Questionnaire

How strong is your relationship with this person? *

	1	2	3	4	5	
We barely know each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	We are very close

Would you be comfortable inviting this person to join a short trip ? *

	1	2	3	4	5	
Would never ask	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am very comfortable

How helpful will this person's advise be when you are planning a short trip? *

	1	2	3	4	5	
Not helpful at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very helpful!

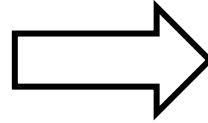
If you left Facebook, how important would it be to bring this friend along? *

	1	2	3	4	5	
Would not matter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Must bring them

Data extraction

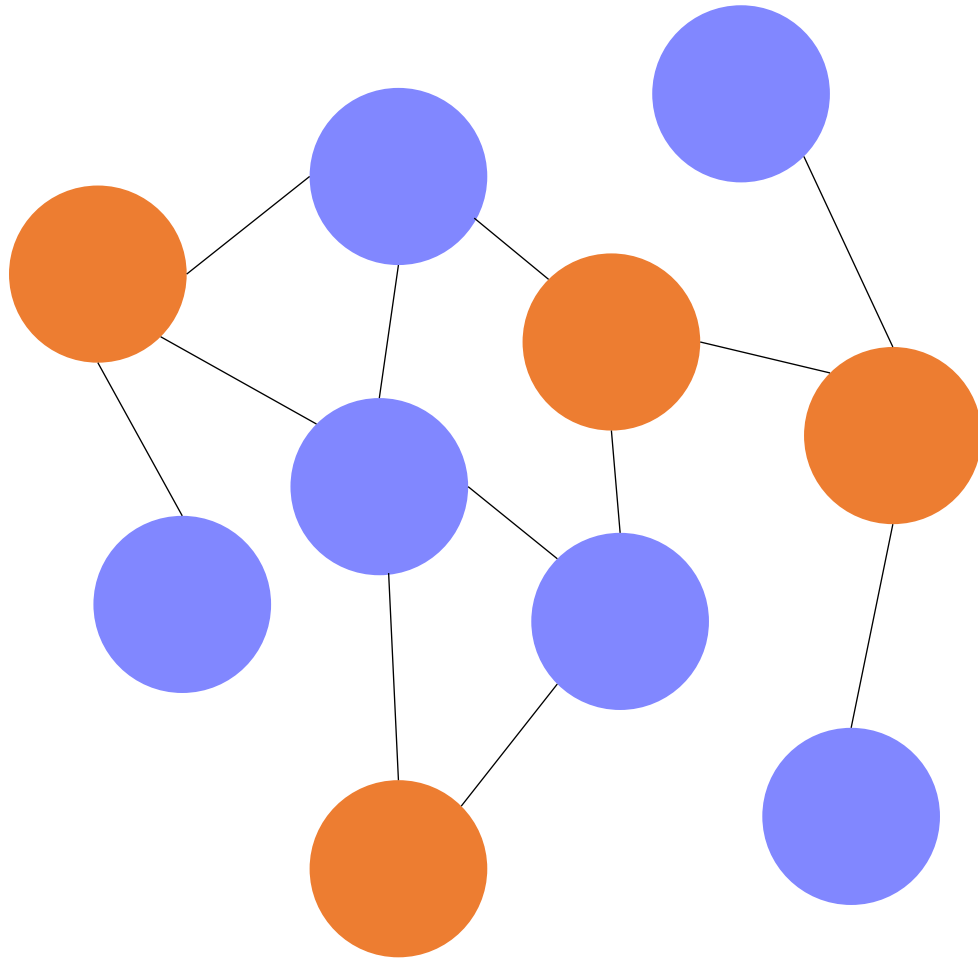
:Tie strength

Predictive Variable	Tie Strength Dimension
Wall words	Intensity
Wall posts	Intensity
Number of likes	Intensity
Number of Comments	Intensity
Number of Friends	Intimacy
Locations visited together	Intimacy
Days since last communication	Duration
Number of mutual friends	Structural
Gender Similarity	Social Distance
Age gap (in days)	Social Distance



Variable	Coefficient	Standard Error	p-value	VIF
Gender Similarity	0.3710	0.123	0.003	1.096
Age Gap	0.0643	0.054	0.237	1.029
Wall Posts	0.2367	0.141	0.095	8.176
Mutual Strength	0.1303	0.073	0.076	1.950
Wall Words	0.0667	0.068	0.326	1.494
Locations Together	0.0943	0.102	0.354	4.335
Number of Friends	-0.1393	0.081	0.089	2.359
Number of Likes	0.1945	0.086	0.025	2.782
Days Since Last Communication	-0.1235	0.056	0.029	1.213
Number of Comments	0.2317	0.106	0.029	3.808
R-squared	0.411	Adjusted R-squared		0.383

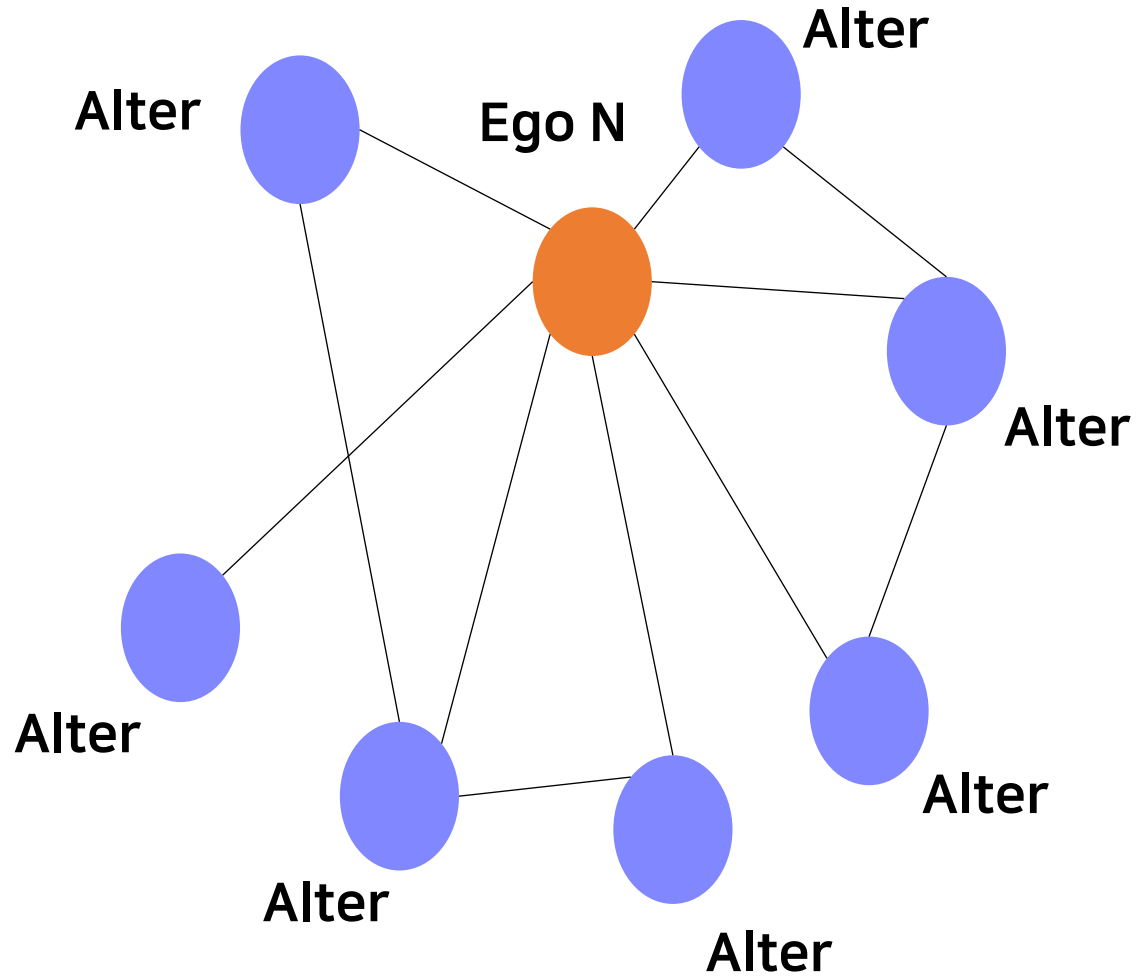
Methods



2-mod Network

: Extract 1-mod network from 2-mod network. Vice versa.

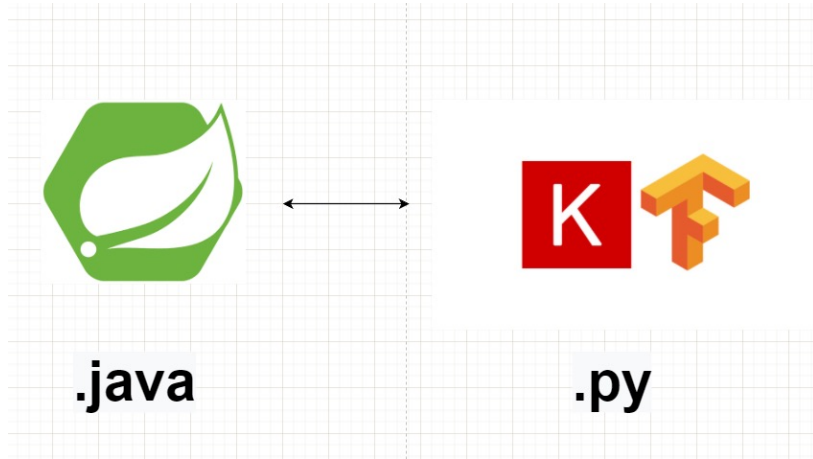
Methods



Ego Network

: Expanding from Ego Network
to full network.
Extract Ego network from Full
network

Appendix



1. ProcessBuilder API

```
@Test
public void givenPythonScript_whenPythonProcessInvoked_thenSuccess() throws Exception {
    ProcessBuilder processBuilder = new ProcessBuilder("python",
        resolvePythonScriptPath("hello.py"));
    processBuilder.redirectErrorStream(true);

    Process process = processBuilder.start();
    List<String> results = readProcessOutput(process.getInputStream());

    assertThat("Results should not be empty", results, is(not(empty())));
    assertThat("Results should contain output of script: ", results, hasItem(
        containsString("Hello Baeldung Readers!!")));

    int exitCode = process.waitFor();
    assertEquals("No errors should be detected", 0, exitCode);
}
```

2. HTTP

> python -m http.server 9000