Jihan Lailatul A // 1301170455 // IF 41 03
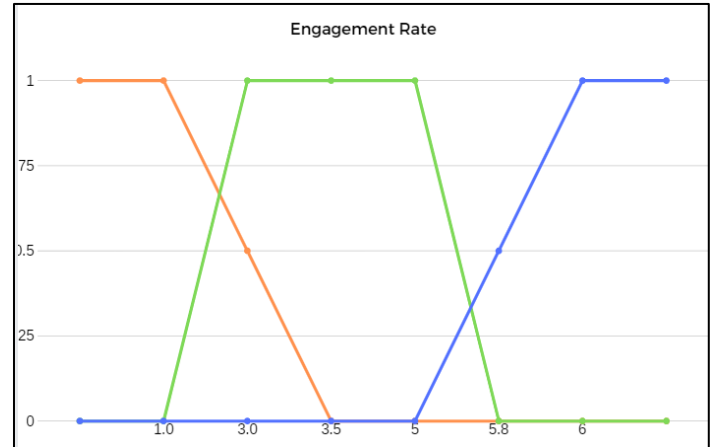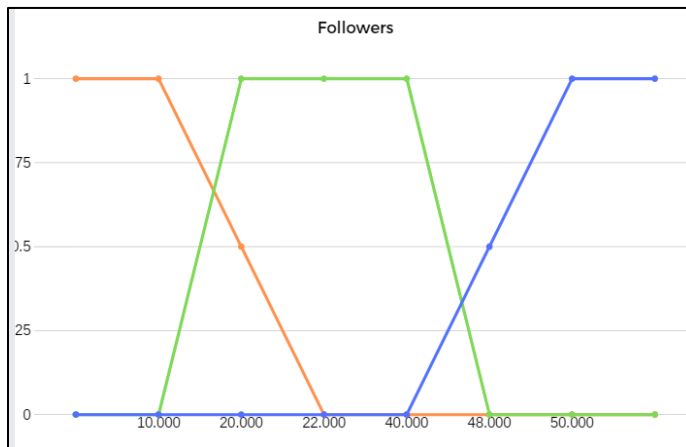
ALGORITMA FUZZY

Penggunaan algorima fuzzy untuk menyeleksi penerimaan 20 influencers terbaik untuk menjadi brand ambassador pada perusahaan.

- **Jumlah dan Nama Linguistik setiap input**

  Followers (3) : High, Average, Low

  Engagement Rate (3): High, Average, Low

- **Bentuk dan Batas Fungsi Keanggotaan Input**

- **Rule Inferensi**

Berdasarkan kasus yang dikerjakan, semakin tinggi jumlah followers dan nilai engagement rate yang dimiliki influencers akan lebih baik. Maka dibuat rule inferensi:

Followers	Engagement Rate	Score
High	High	Accepted
High	Average	Accepted
High	Low	Considered
Average	High	Accepted
Average	Average	Considered
Average	Low	Considered
Low	High	Considered
Low	Average	Rejected
Low	Low	Rejected

- **Tipe (Metode) Defuzzifikasi**
  Metode Sugeno : Metode ini dipilih karena memiliki langkah yang lebih singkat

Rumus Score (Z):

$$z^* = \frac{\sum_{i=1}^{l} \mu B_i . c_i}{\sum_{i=1}^{l} \mu B_i}$$
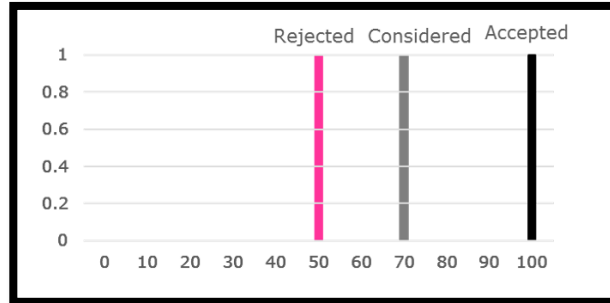
- **Screenshot**

Contoh Inference

```
ID: 4
Followers        Engagement Rate     Score
==================================================
High : 0.39  High : 0        Accepted    : 0
High : 0.39  Avg  : 0.2      Accepted    : 0.2
High : 0.39  Low  : 0.84     Considered  : 0.39
Avg  : 0.52  High : 0        Accepted    : 0
Avg  : 0.52  Avg  : 0.2      Considered  : 0.2
Avg  : 0.52  Low  : 0.84     Considered  : 0.52
Low  : 0     High : 0        Considered  : 0
Low  : 0     Avg  : 0.2      Rejected    : 0
Low  : 0     Low  : 0.84     Rejected    : 0
==================================================
Accepted Score   : 0.2
Considered Score : 0.52
Rejected Score   : 0
Z : 81.96


ID: 5
Followers        Engagement Rate     Score
==================================================
High : 0     High : 0        Accepted    : 0
High : 0     Avg  : 1        Accepted    : 0
High : 0     Low  : 0        Considered  : 0
Avg  : 0.55  High : 0        Accepted    : 0
Avg  : 0.55  Avg  : 1        Considered  : 0.55
Avg  : 0.55  Low  : 0        Considered  : 0
Low  : 0.54  High : 0        Considered  : 0
Low  : 0.54  Avg  : 1        Rejected    : 0.54
Low  : 0.54  Low  : 0        Rejected    : 0
==================================================
Accepted Score   : 0
Considered Score : 0.55
Rejected Score   : 0.54
Z : 62.66
```

Hasil Akhir pada Output Running Program

```
                CHOSEN INFLUENCERS
****************************************************
*    Influencers ID    ||        Score        *
****************************************************
*         2            ||         100         *
*         74           ||         100         *
*         60           ||         100         *
*         59           ||         100         *
*         13           ||         100         *
*         11           ||         100         *
*         53           ||        97.32        *
*         48           ||        96.29        *
*         75           ||        95.83        *
*         25           ||        93.16        *
*         93           ||        89.29        *
*         100          ||        88.2         *
*         72           ||        87.5         *
*         61           ||        87.5         *
*         41           ||        87.5         *
*         19           ||        87.5         *
*         50           ||        84.51        *
*         4            ||        81.96        *
*         7            ||        80.92        *
*         63           ||        79.81        *
****************************************************
```