

NAMA : ROSSANTI KUSUMADEWI

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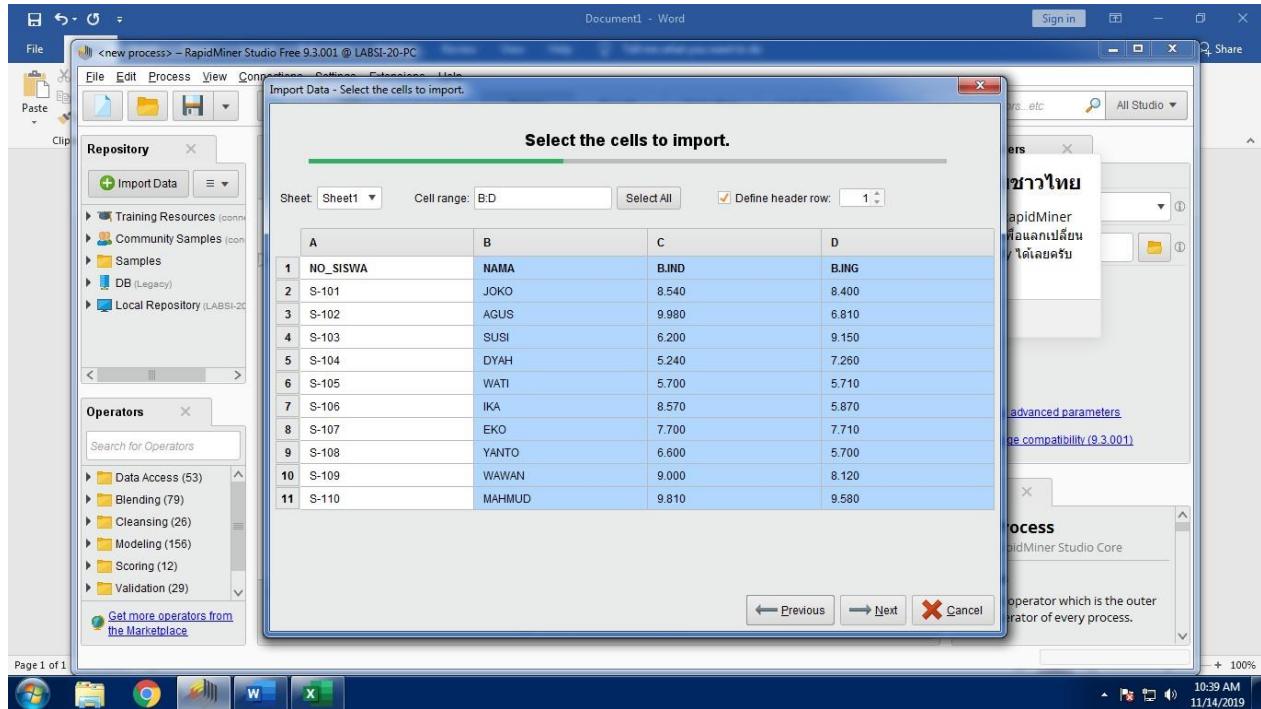
KEGIATAN PRAKTIKUM

- Berikut table data nilai siswa :

The screenshot shows a Microsoft Excel spreadsheet titled "Tabel_NilaiUjian - Excel". The table contains 11 rows of data, starting from row 1 to row 11. The columns are labeled A through T. Column A is "NO_SISWA", column B is "NAMA", column C is "B.IND", and column D is "B.ING". The data includes student names like JOKO, AGUS, SUSI, DYAH, WATI, IKKA, EKO, YANTO, WAWAN, and MAHMUD, along with their respective scores. Row 17 is highlighted in green, indicating it is the current active row.

| NO_SISWA | NAMA | B.IND | B.ING |
|----------|--------|-------|-------|
| S-101 | JOKO | 8.54 | 8.4 |
| S-102 | AGUS | 9.98 | 6.81 |
| S-103 | SUSI | 6.2 | 9.15 |
| S-104 | DYAH | 5.24 | 7.26 |
| S-105 | WATI | 5.7 | 5.71 |
| S-106 | IKAA | 8.57 | 5.87 |
| S-107 | EKO | 7.7 | 7.71 |
| S-108 | YANTO | 6.6 | 5.7 |
| S-109 | WAWAN | 9 | 8.12 |
| S-110 | MAHMUD | 9.81 | 9.58 |

- Gunakan file Tabel_NilaiUjian.xlsx sebagai data yang akan digunakan dalam proses Clustering. Lalu import ke dalam aplikasi RapidMiner.



| NAMA | B.IND | B.ING |
|--------|-------|-------|
| JOKO | 8.540 | 8.400 |
| AGUS | 9.980 | 6.810 |
| SUSI | 6.200 | 9.150 |
| DYAH | 5.240 | 7.260 |
| WATI | 5.700 | 5.710 |
| IKA | 8.570 | 5.870 |
| EKO | 7.700 | 7.710 |
| YANTO | 6.600 | 5.700 |
| WAWAN | 9.000 | 8.120 |
| MAHMUD | 9.810 | 9.580 |

The screenshot shows the RapidMiner Studio interface. On the left, there's a sidebar with 'Result History' and tabs for 'Data', 'Statistics', 'Visualizations', and 'Annotations'. The main area displays a table titled 'ExampleSet (10 examples, 1 special attribute, 2 regular attributes)'. The table has columns: Row No., NAMA, BJND, and BJNG. The data is as follows:

| Row No. | NAMA | BJND | BJNG |
|---------|--------|-------|-------|
| 1 | JOKO | 8.540 | 8.400 |
| 2 | AGUS | 9.980 | 6.810 |
| 3 | SUSI | 6.200 | 9.150 |
| 4 | DYAH | 5.240 | 7.260 |
| 5 | WATI | 5.700 | 5.710 |
| 6 | IKA | 8.570 | 5.870 |
| 7 | EKO | 7.700 | 7.710 |
| 8 | YANTO | 6.600 | 5.700 |
| 9 | WAWAN | 9 | 8.120 |
| 10 | MAHMUD | 9.810 | 9.580 |

A right-hand panel displays a welcome message from RapidMiner Thailand, featuring a photo of a person and text in Thai. Below the message is a 'Repository' section showing connections to ABSI-20 and ABSI-20 (v1, 11/).

- Tambahkan operator k-Means. Lalu Jalankan dengan menekan tombol run (F11)

The screenshot shows the RapidMiner Studio interface in 'Design' mode. On the left, there's a 'Repository' panel with 'Samples', 'DB (Legacy)', and 'Local Repository (LABSI-20)' sections. Below it is an 'Operators' panel with a 'svd' category. The main area shows a process flow: 'Retrieve Data_NilaiUjian' → 'Clustering' → 'SVD'. The 'Parameters' panel on the right is set for the 'SVD (Singular Value Decomposition)' operator, with 'dimensionality reduction' set to 'fixed number' and 'dimensions' set to 1. A 'Help' panel provides details about the Singular Value Decomposition operator.

- Nilai Eigenvalue

The screenshot shows the RapidMiner Studio interface with the following details:

- Title Bar:** Document1 - Word
- Menu Bar:** File, Edit, Process, View, Connections, Settings, Extensions, Help
- Toolbar:** Standard icons for Paste, Clip, etc.
- Views:** Design, Results, Turbo Prep, Auto Model
- Search Bar:** Find data, operators...etc, All Studio
- Result History:** Cluster Model (Clustering), ExampleSet (/Local Repository/Data_NilaiUjian), SVD (SVD), ExampleSet (Clustering), ExampleSet (SVD)
- Eigenvalues View:**

| Component | Singular Value | Proportion of Singular V... | Cumulative Singular Val... | Cumulative Proportion o... |
|-----------|----------------|-----------------------------|----------------------------|----------------------------|
| SVD 1 | 34.340 | 0.898 | 34.340 | 0.898 |
| SVD 2 | 3.906 | 0.102 | 38.246 | 1.000 |
- Repository View:**
 - Import Data
 - Training Resources (connected)
 - Community Samples (connected)
 - Samples
 - DB (Legacy)
 - Local Repository (LABSI-20)
 - Connections (LABSI-20)
 - data (LABSI-20)
 - processes (LABSI-20)
 - Data_NilaiUjian (LABSI-20 - v1, 11)
- System Status:** Page 3 of 3, 10:44 AM, 11/14/2019, 100%

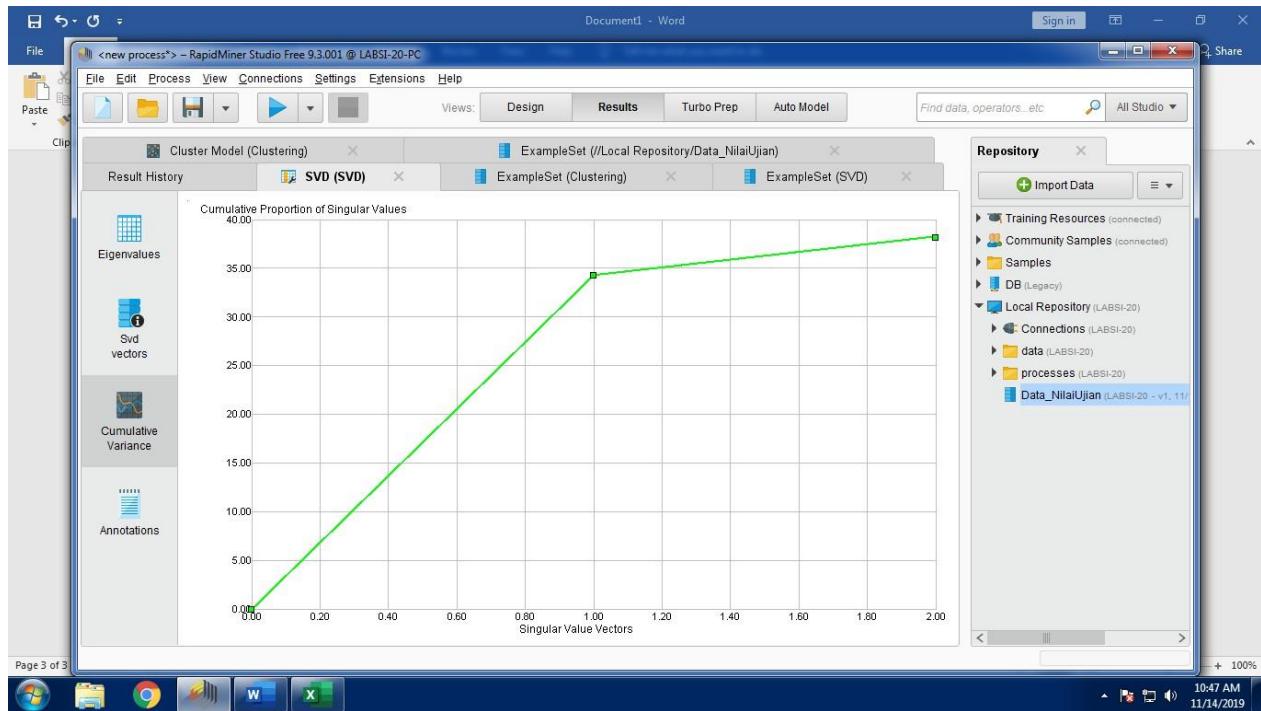
- Nilai Svd vectors

The screenshot shows the RapidMiner Studio interface with the following details:

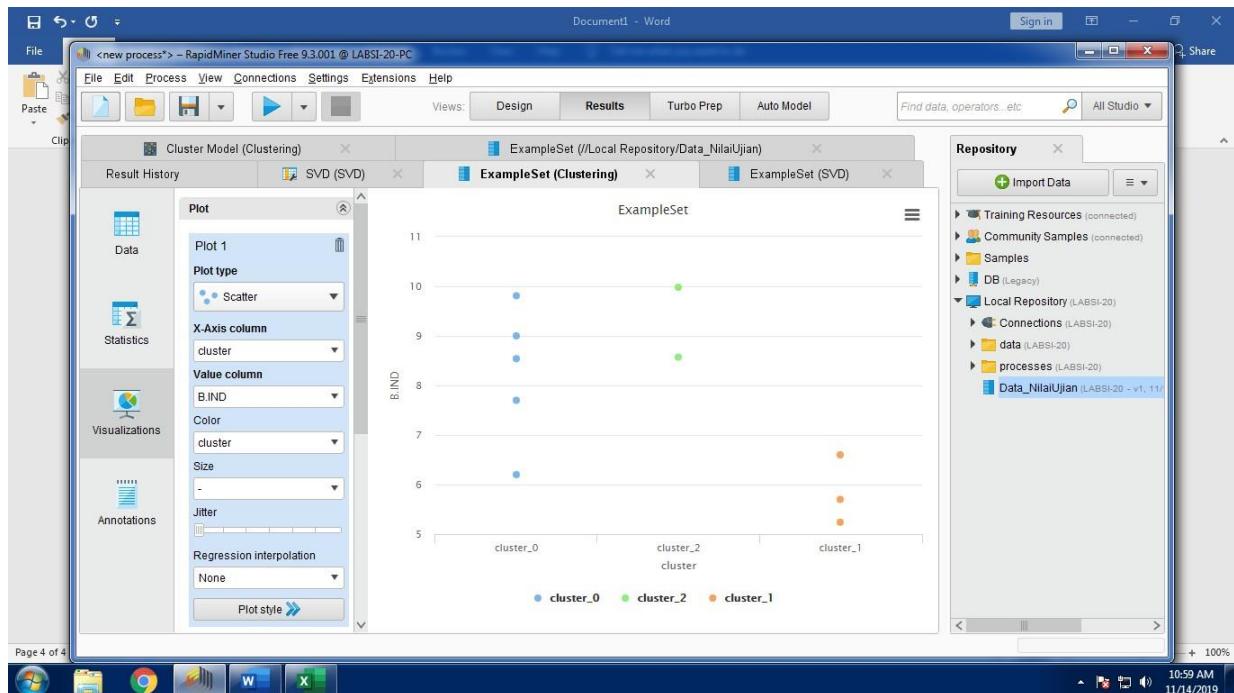
- Title Bar:** Document1 - Word
- Menu Bar:** File, Edit, Process, View, Connections, Settings, Extensions, Help
- Toolbar:** Standard icons for Paste, Clip, etc.
- Views:** Design, Results, Turbo Prep, Auto Model
- Search Bar:** Find data, operators...etc, All Studio
- Result History:** Cluster Model (Clustering), ExampleSet (/Local Repository/Data_NilaiUjian), SVD (SVD), ExampleSet (Clustering), ExampleSet (SVD)
- Svd vectors View:**

| Attribute | SVD Vector 1 |
|-----------|--------------|
| B.IND | 0.723 |
| B.ING | 0.690 |
- Repository View:**
 - Import Data
 - Training Resources (connected)
 - Community Samples (connected)
 - Samples
 - DB (Legacy)
 - Local Repository (LABSI-20)
 - Connections (LABSI-20)
 - data (LABSI-20)
 - processes (LABSI-20)
 - Data_NilaiUjian (LABSI-20 - v1, 11)
- System Status:** Page 3 of 4, 10:48 AM, 11/14/2019, 100%

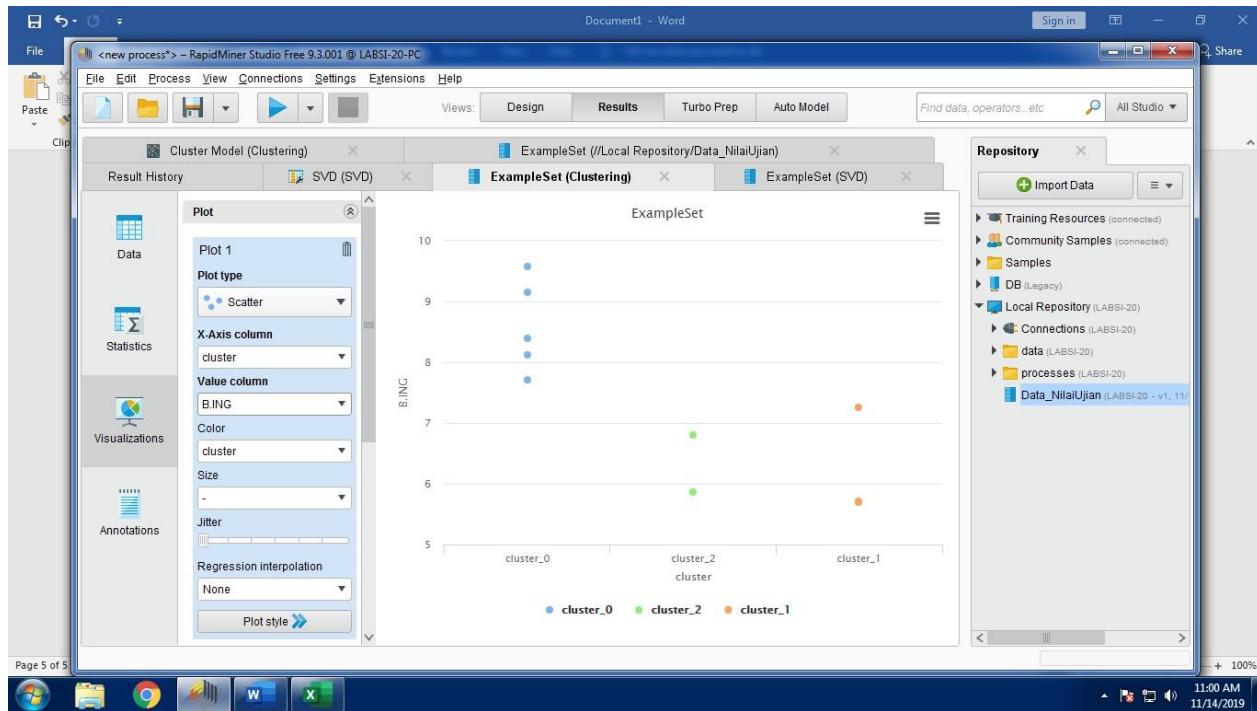
- Nilai Cumulative Variance



- Kelompok siswa bidang B.indonesia



- Kelompok siswa bidang B.inggris



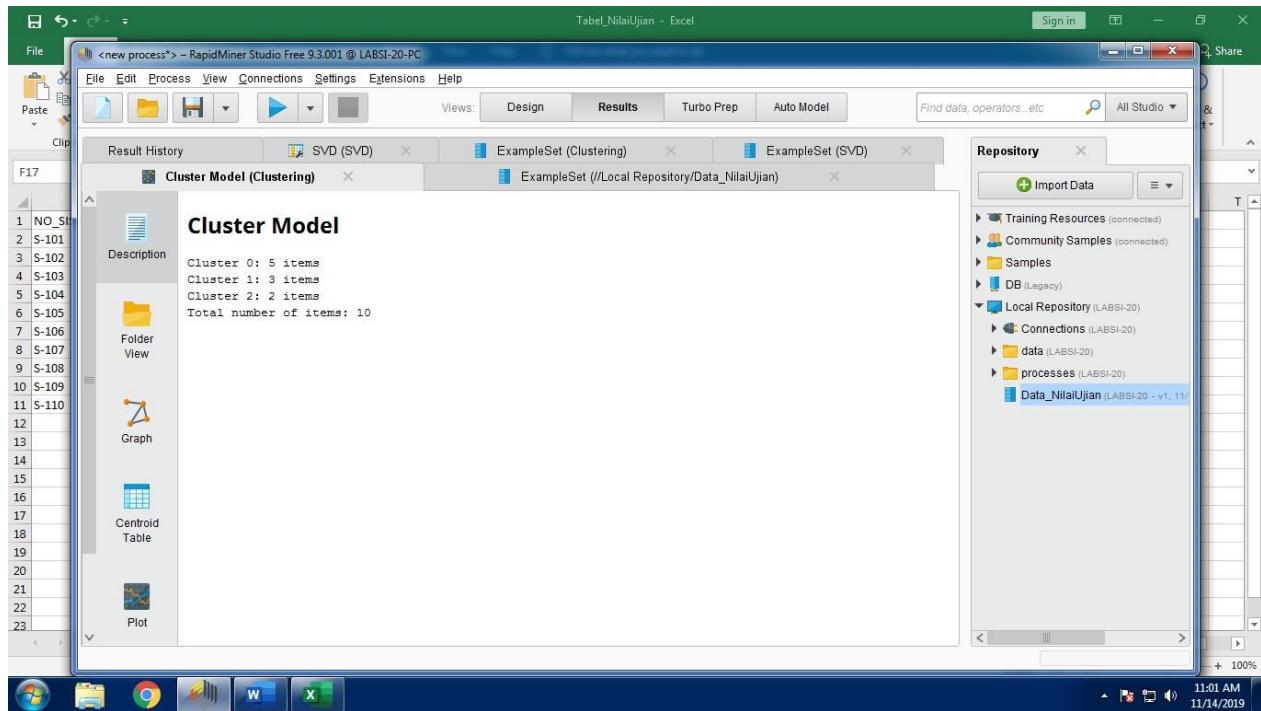
- Kelompok masing-masing siswa yang dikelompokkan berdasarkan cluster 0, cluster 1, cluster 2.

The screenshot shows the RapidMiner Studio interface with a table titled 'ExampleSet'. The columns are 'Row No.', 'NAMA', 'cluster', 'B.IND', and 'B.ING'. The data is as follows:

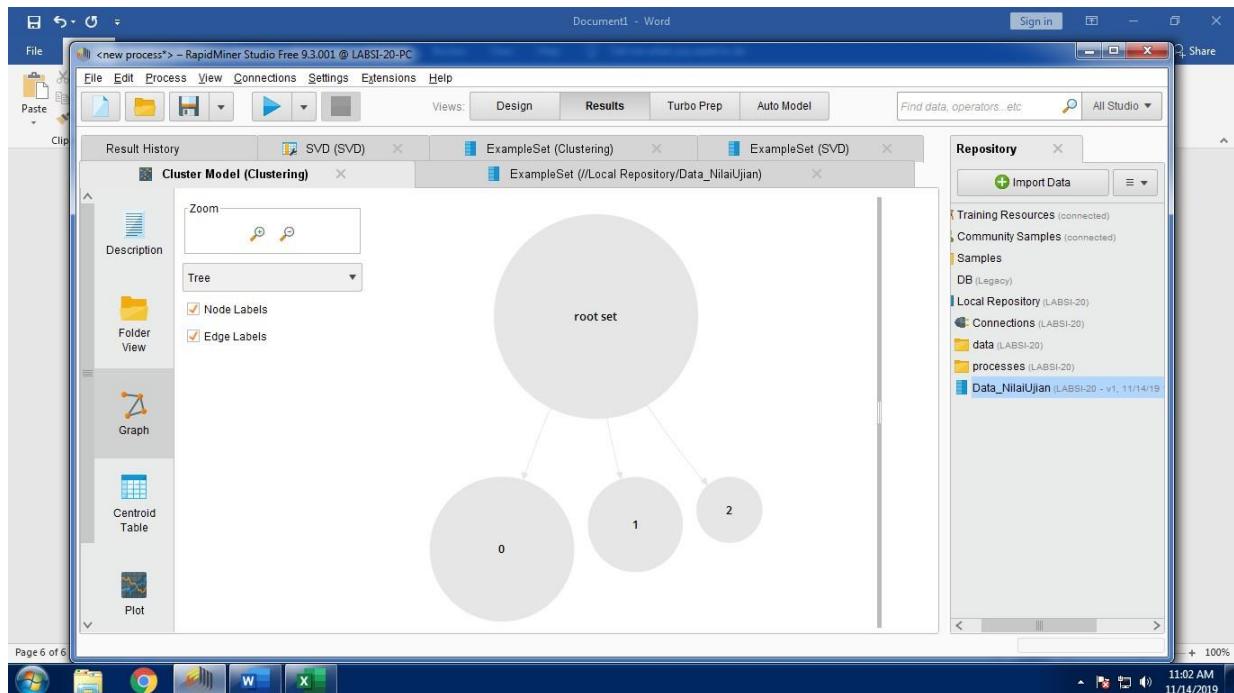
| Row No. | NAMA | cluster | B.IND | B.ING |
|---------|--------|-----------|-------|-------|
| 1 | JOKO | cluster_0 | 8.540 | 8.400 |
| 2 | AGUS | cluster_2 | 9.980 | 6.810 |
| 3 | SUSI | cluster_0 | 6.200 | 9.150 |
| 4 | DYAH | cluster_1 | 5.240 | 7.260 |
| 5 | WATI | cluster_1 | 5.700 | 5.710 |
| 6 | IKA | cluster_2 | 8.570 | 5.870 |
| 7 | EKO | cluster_0 | 7.700 | 7.710 |
| 8 | YANTO | cluster_1 | 6.600 | 5.700 |
| 9 | WAWAN | cluster_0 | 9 | 8.120 |
| 10 | MAHMUD | cluster_0 | 9.810 | 9.580 |

ExampleSet (10 examples, 2 special attributes, 2 regular attributes)

- Description



- Graph



Kesimpulan :

The screenshot shows the RapidMiner Studio interface. The main window displays a clustered dataset named 'ExampleSet (Clustering)'. The data table has columns: Row No., NAMA, cluster ↑, B.IND, and B.JNG. The data rows are:

| Row No. | NAMA | cluster ↑ | B.IND | B.JNG |
|---------|--------|-----------|-------|-------|
| 1 | JOKO | cluster_0 | 8.540 | 8.400 |
| 3 | SUSI | cluster_0 | 6.200 | 9.150 |
| 7 | EKO | cluster_0 | 7.700 | 7.710 |
| 9 | WAWAN | cluster_0 | 9 | 8.120 |
| 10 | MAHMUD | cluster_0 | 9.810 | 9.580 |
| 4 | DYAH | cluster_1 | 5.240 | 7.260 |
| 5 | WATI | cluster_1 | 5.700 | 5.710 |
| 8 | YANTO | cluster_1 | 6.600 | 5.700 |
| 2 | AGUS | cluster_2 | 9.980 | 6.810 |
| 6 | IKA | cluster_2 | 8.570 | 5.870 |

Below the table, it says 'ExampleSet (10 examples, 2 special attributes, 2 regular attributes)'. The right side of the interface shows the 'Repository' pane with various resources listed.

1. Cluster 2 yang diajukan untuk lomba olimpiade bidang B.Indonesia
2. Cluster 0 yang diajukan untuk lomba olimpiade bidang B.Inggris

Tugas

- Berikut adalah table siswa dan memasukkan nilai secara random dengan =5+RAND()*5

The screenshot shows a Microsoft Excel spreadsheet titled "TUGAS.xlsx - Microsoft Excel". The table contains 30 rows of student information, with columns for NO_SISWA, NAMA, B.IND, B.ING, MTK, and IPA. The data is as follows:

| NO_SISWA | NAMA | B.IND | B.ING | MTK | IPA |
|----------|---------|-------|-------|------|------|
| 1 S-101 | JOKO | 8,96 | 9,25 | 8,40 | 5,77 |
| 2 S-102 | AGUS | 5,47 | 5,88 | 7,02 | 5,28 |
| 3 S-103 | SUSI | 7,27 | 8,54 | 7,78 | 6,68 |
| 4 S-104 | DYAH | 7,55 | 5,40 | 7,95 | 8,51 |
| 5 S-105 | WATI | 5,85 | 7,55 | 5,11 | 9,27 |
| 6 S-106 | IKA | 7,43 | 8,54 | 9,27 | 9,00 |
| 7 S-107 | EKO | 6,29 | 9,81 | 5,24 | 7,83 |
| 8 S-108 | YANTO | 7,02 | 5,64 | 8,70 | 7,14 |
| 10 S-109 | WAWAN | 5,18 | 5,03 | 6,97 | 8,10 |
| 11 S-110 | MAHMUD | 8,10 | 5,74 | 9,37 | 5,54 |
| 12 S-111 | BUDI | 7,14 | 9,38 | 5,13 | 5,18 |
| 13 S-112 | SANTI | 6,74 | 6,01 | 6,95 | 5,93 |
| 14 S-113 | DIAN | 8,55 | 9,70 | 6,58 | 8,83 |
| 15 S-114 | DANI | 8,64 | 6,78 | 7,07 | 5,78 |
| 16 S-115 | AHMAD | 8,79 | 8,61 | 9,89 | 6,91 |
| 17 S-116 | BAYU | 6,79 | 9,41 | 5,60 | 8,55 |
| 18 S-117 | RISA | 7,21 | 7,85 | 7,81 | 6,28 |
| 19 S-118 | RANI | 5,16 | 9,61 | 7,19 | 8,85 |
| 20 S-119 | YANI | 9,75 | 5,57 | 5,63 | 5,90 |
| 21 S-120 | RATIH | 6,23 | 9,10 | 9,81 | 6,27 |
| 22 S-121 | INDAH | 7,30 | 8,61 | 9,50 | 5,19 |
| 23 S-122 | JONO | 8,42 | 8,18 | 7,69 | 6,98 |
| 24 S-123 | SARAH | 8,66 | 6,44 | 9,54 | 9,72 |
| 25 S-124 | RAMA | 9,15 | 6,99 | 6,50 | 8,64 |
| 26 S-125 | BAMBANG | 7,23 | 6,46 | 8,80 | 5,96 |
| 27 S-126 | HADI | 5,99 | 8,64 | 7,00 | 7,35 |
| 28 S-127 | NANA | 7,39 | 8,78 | 5,12 | 9,79 |
| 29 S-128 | FEBRI | 9,32 | 6,06 | 7,48 | 7,73 |
| 30 S-129 | DENI | 5,90 | 7,26 | 5,82 | 7,12 |

- Gunakan file Tugas_NilaiUjian.xlsb sebagai data yang akan digunakan dalam proses Clustering. Lalu import ke dalam aplikasi RapidMiner.

The screenshot shows the RapidMiner Studio Free interface. A dialog box titled "Import Data - Select the cells to import" is open, showing a grid of student data from Sheet1. The data includes columns A through F and rows 13 to 26. The "Cell range" is set to B:F. The "Select All" button is checked. The "Define header row" checkbox is checked, with a value of 1 selected. The background shows the RapidMiner workspace with various operators and a process tree.

The screenshot shows the RapidMiner interface with the 'Format your columns' dialog box open. The dialog displays a table with 13 rows and 6 columns. The columns are labeled: NAMA, polynominal_id, B.IND, B.ING, MTK, and IPA. The last column (IPA) contains the value 7.619, which is highlighted with a red border. A green checkmark at the bottom right of the dialog indicates that there are no problems.

- Tambahkan operator k-Means. Lalu Jalankan dengan menekan tombol run (F11)

The screenshot shows the RapidMiner process editor with a process flow. The flow starts with a 'Retrieve Data_Tugas...' operator, followed by a 'Clustering' operator, and then an 'SVD' operator. The 'Clustering' operator is highlighted with a red border. To the right, the 'Parameters' panel is open for the 'Clustering (k-Means)' operator, with 'max runs' set to 10. The 'Help' panel at the bottom right provides information about the k-Means operator.

- Nilai Eigenvalue

The screenshot shows the RapidMiner Studio interface with the process titled "<new process*>". The central workspace displays the "SVD (SVD)" result, which includes a table of Eigenvalues. The table has columns: Component, Singular Value, Proportion of Singular V..., Cumulative Singular Val..., and Cumulative Proportion o.... The data is as follows:

| Component | Singular Value | Proportion of Singular V... | Cumulative Singular Val... | Cumulative Proportion o... |
|-----------|----------------|-----------------------------|----------------------------|----------------------------|
| SVD 1 | 83.539 | 0.793 | 83.539 | 0.793 |
| SVD 2 | 7.636 | 0.072 | 91.175 | 0.865 |
| SVD 3 | 7.371 | 0.070 | 98.546 | 0.935 |
| SVD 4 | 6.821 | 0.065 | 105.367 | 1.000 |

The left sidebar shows tabs for Eigenvalues, Svd vectors, Cumulative Variance, and Annotations. The right sidebar shows the Repository with various training resources and samples.

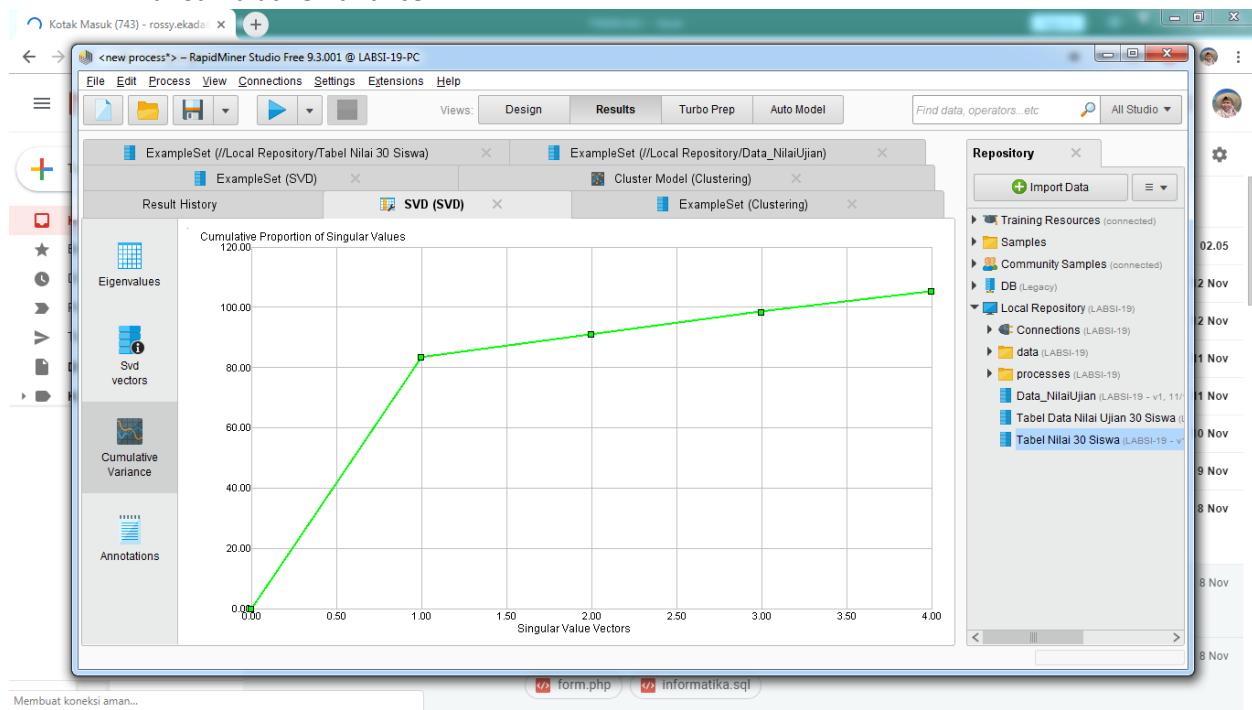
- Nilai Svd Vectors

The screenshot shows the RapidMiner Studio interface with the process titled "<new process*>". The central workspace displays the "SVD (SVD)" result, which includes a table of Svd vectors. The table has columns: Attribute, SVD Vector 1, SVD Vector 2, and SVD Vector 3. The data is as follows:

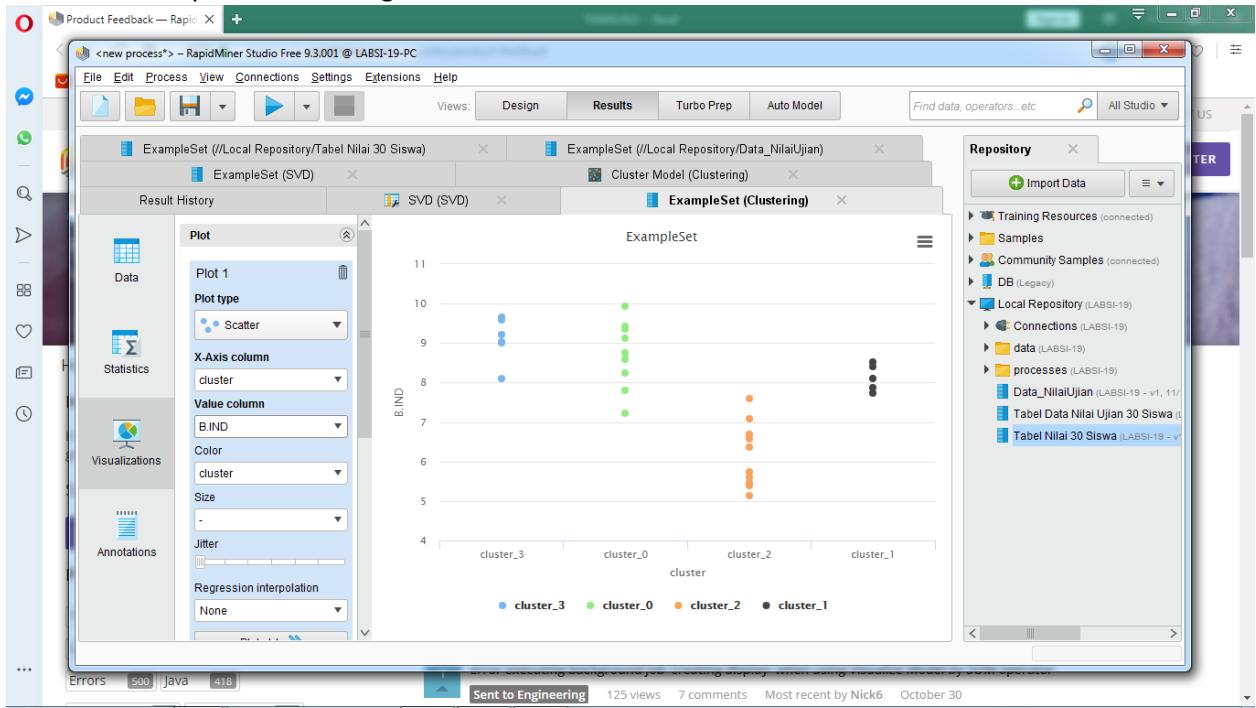
| Attribute | SVD Vector 1 | SVD Vector 2 | SVD Vector 3 |
|-----------|--------------|--------------|--------------|
| BIND | 0.517 | -0.342 | 0.712 |
| BING | 0.505 | 0.640 | 0.194 |
| MTK | 0.493 | -0.610 | -0.456 |
| IPA | 0.485 | 0.319 | -0.498 |

The left sidebar shows tabs for Eigenvalues, Svd vectors, Cumulative Variance, and Annotations. The right sidebar shows the Repository with various training resources and samples.

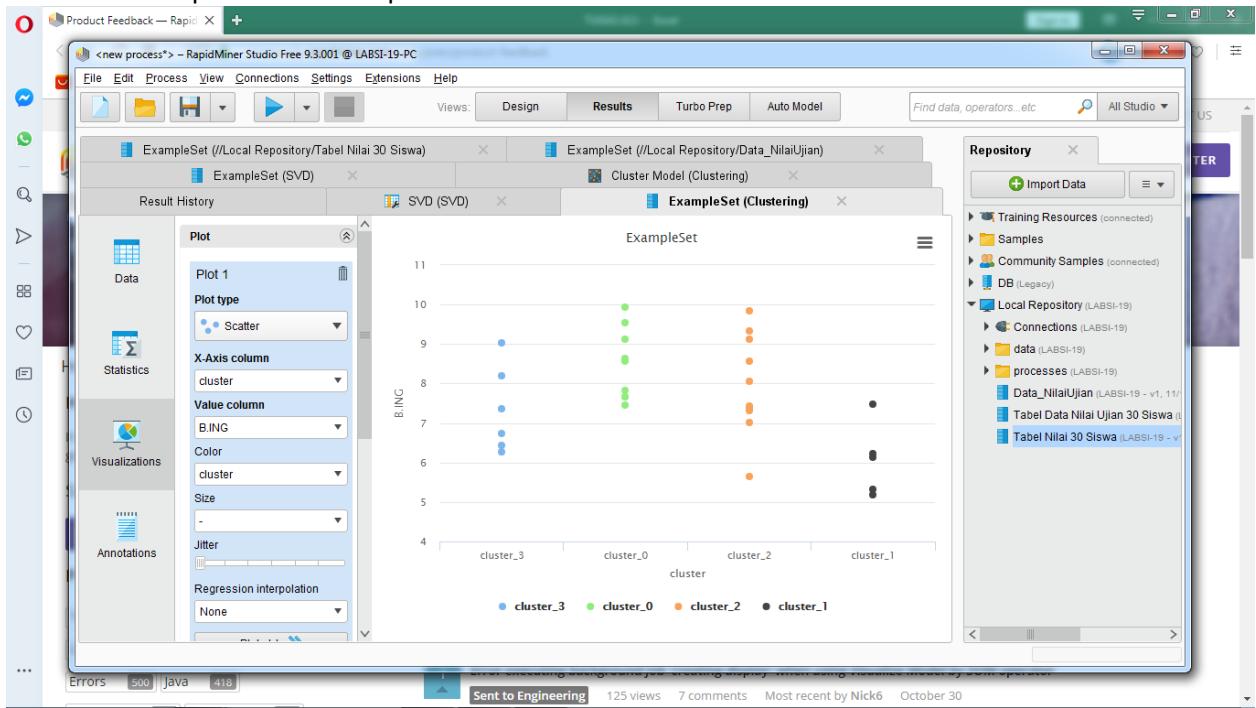
- Nilai Cumulative Variance



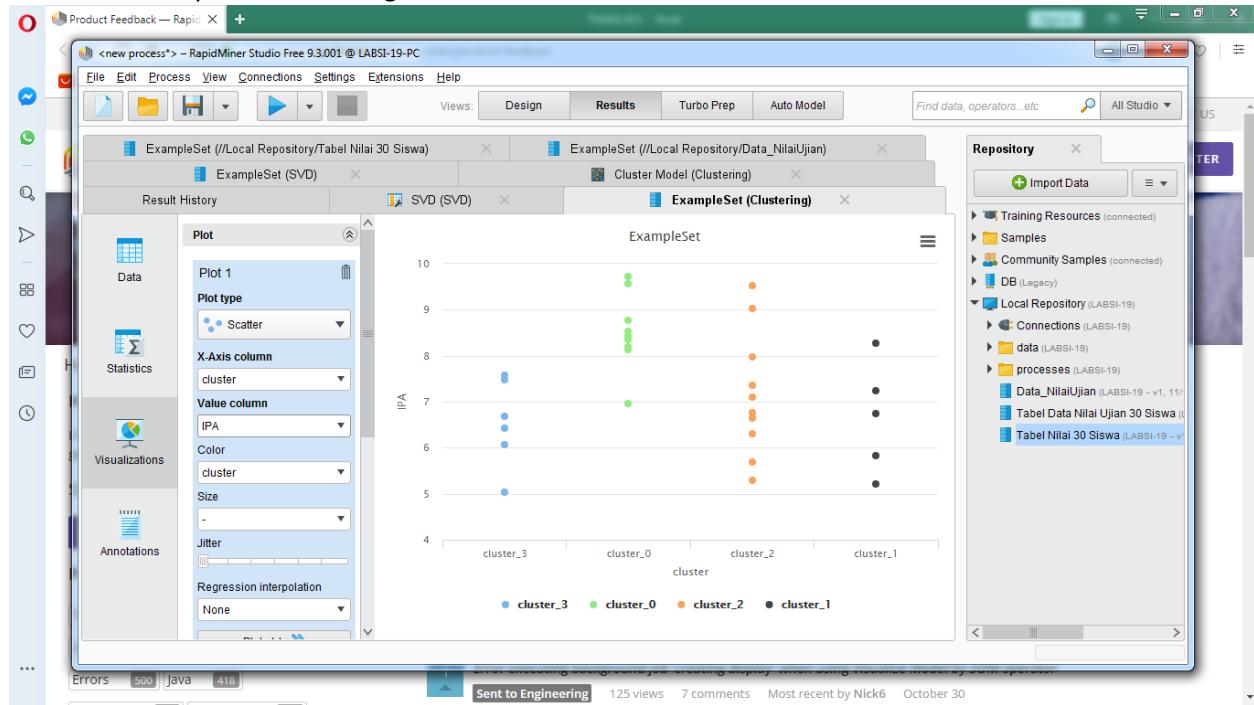
- Kelompok siswa bidang B.INDONESIA



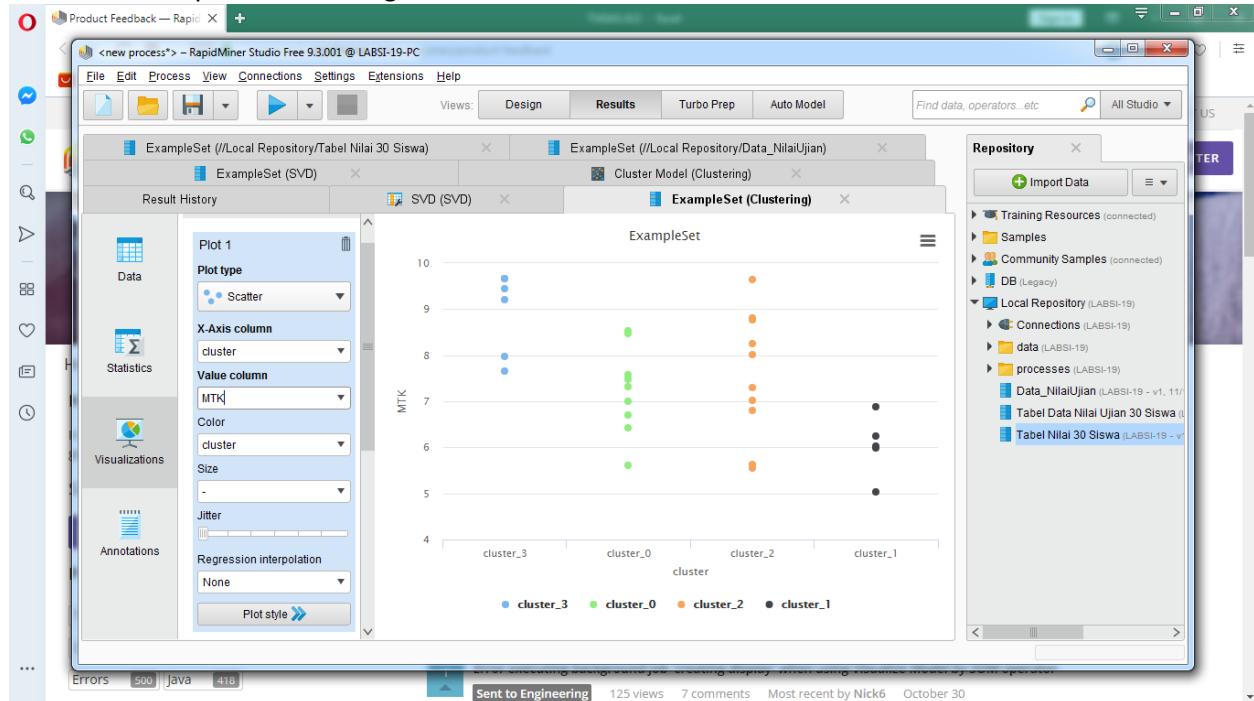
- Kelompok siswa kelompok B.ING



- Kelompok siswa bidang IPA



- Kelompok siswa bidang MTK



- Masing-masing nama siswa yang terdapat dalam kelompok cluster 0, cluster 1, cluster 2, cluster 3.

The screenshot shows the RapidMiner Studio interface with the following details:

- Title Bar:** Product Feedback — RapidMiner Studio Free 9.3.001 @ LABSI-19-PC
- Menu Bar:** File, Edit, Process, View, Connections, Settings, Extensions, Help
- Toolbars:** Standard (File, Open, Save, Print, etc.) and a toolbar with icons for Data, Statistics, Visualizations, Annotations, and a search bar.
- Views:** Design, Results, Turbo Prep, Auto Model, Find data, operators...etc, All Studio.
- Result History:** Shows three entries: SVD (SVD), ExampleSet (Clustering), and Cluster Model (Clustering).
- Data View:** Shows an ExampleSet (SVD) with 30 examples. The table includes columns: Row No., NAMA, cluster ↑, and svd_1. The data is as follows:

| Row No. | NAMA | cluster ↑ | svd_1 |
|---------|-------|-----------|-------|
| 2 | AGUS | cluster_0 | 0.201 |
| 3 | SUSI | cluster_0 | 0.205 |
| 4 | DYAH | cluster_0 | 0.200 |
| 9 | WAWAN | cluster_0 | 0.193 |
| 11 | BUDI | cluster_0 | 0.198 |
| 14 | DANI | cluster_0 | 0.193 |
| 17 | RISA | cluster_0 | 0.201 |
| 21 | INDAH | cluster_0 | 0.195 |
| 23 | SARAH | cluster_0 | 0.190 |
| 12 | SANTI | cluster_1 | 0.169 |
| 20 | RATIH | cluster_1 | 0.163 |

- Repository:** Shows the Local Repository (LABSI-19) with various resources like Connections, data, processes, and tables.
- Status Bar:** Errors 500, Java 418, Sent to Engineering, 125 views, 7 comments, Most recent by Nick6, October 30.

The screenshot shows the RapidMiner Studio interface with the following details:

- Title Bar:** Product Feedback — RapidMiner Studio Free 9.3.001 @ LABSI-19-PC
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- Views:** Design, Results, Turbo Prep, Auto Model, Find data, operators...etc, All Studio.
- Result History:** Shows three entries: SVD (SVD), ExampleSet (Clustering), and Cluster Model (Clustering).
- Data View:** Shows an ExampleSet (SVD) with 30 examples. The table includes columns: Row No., NAMA, cluster ↑, and svd_1. The data is as follows:

| Row No. | NAMA | cluster ↑ | svd_1 |
|---------|--------|-----------|-------|
| 24 | RAMA | cluster_1 | 0.159 |
| 29 | DENI | cluster_1 | 0.150 |
| 30 | TONI | cluster_1 | 0.164 |
| 5 | WATI | cluster_2 | 0.157 |
| 6 | IKA | cluster_2 | 0.172 |
| 8 | YANTO | cluster_2 | 0.172 |
| 10 | MAHMUD | cluster_2 | 0.180 |
| 13 | DIAN | cluster_2 | 0.172 |
| 16 | BAYU | cluster_2 | 0.155 |
| 18 | RANI | cluster_2 | 0.200 |
| 22 | JONO | cluster_2 | 0.178 |

- Repository:** Shows the Local Repository (LABSI-19) with various resources like Connections, data, processes, and tables.
- Status Bar:** Errors 500, Java 418, Sent to Engineering, 125 views, 7 comments, Most recent by Nick6, October 30.

Product Feedback — RapidMiner

<new process> — RapidMiner Studio Free 9.3.001 @ LABSI-19-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

Result History SVD (SVD) ExampleSet (Clustering)

ExampleSet (//Local Repository/Tabel Nilai 30 Siswa) ExampleSet (//Local Repository/Data_NilaiUjian)

ExampleSet (SVD) Cluster Model (Clustering)

Data Statistics Visualizations Annotations

Open in Turbo Prep Auto Model Filter (30 / 30 examples): all

| Row No. | NAMA | cluster ↑ | svd_1 |
|---------|---------|-----------|-------|
| 16 | BAYU | cluster_2 | 0.155 |
| 18 | RANI | cluster_2 | 0.200 |
| 22 | JONO | cluster_2 | 0.178 |
| 27 | NANA | cluster_2 | 0.160 |
| 28 | FEBRI | cluster_2 | 0.181 |
| 1 | JOKO | cluster_3 | 0.189 |
| 7 | EKO | cluster_3 | 0.190 |
| 15 | AHMAD | cluster_3 | 0.183 |
| 19 | YANI | cluster_3 | 0.196 |
| 25 | BAMBANG | cluster_3 | 0.197 |
| 26 | HADI | cluster_3 | 0.193 |

ExampleSet (30 examples, 2 special attributes, 1 regular attribute)

Repository

- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB (Legacy)
- Local Repository (LABSI-19)
 - Connections (LABSI-19)
 - data (LABSI-19)
 - processes (LABSI-19)
 - Data_NilaiUjian (LABSI-19 - v1, 11/11)
 - Tabel Data Nilai Ujian 30 Siswa (LABSI-19 - v1, 11/11)
 - Tabel Nilai 30 Siswa (LABSI-19 - v1, 11/11)

Errors 500 Java 418 Sent to Engineering 125 views 7 comments Most recent by Nick6 October 30

- Description

Product Feedback — RapidMiner

<new process> — RapidMiner Studio Free 9.3.001 @ LABSI-19-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Find data, operators... etc All Studio

Result History SVD (SVD) ExampleSet (Clustering)

ExampleSet (//Local Repository/Tabel Nilai 30 Siswa) ExampleSet (//Local Repository/Data_NilaiUjian)

ExampleSet (SVD) Cluster Model (Clustering)

Description Folder View Graph Centroid Table

Cluster Model

Cluster 0: 9 items
Cluster 1: 5 items
Cluster 2: 10 items
Cluster 3: 6 items
Total number of items: 30

Repository

- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB (Legacy)
- Local Repository (LABSI-19)
 - Connections (LABSI-19)
 - data (LABSI-19)
 - processes (LABSI-19)
 - Data_NilaiUjian (LABSI-19 - v1, 11/11)
 - Tabel Data Nilai Ujian 30 Siswa (LABSI-19 - v1, 11/11)
 - Tabel Nilai 30 Siswa (LABSI-19 - v1, 11/11)

Errors 500 Java 418 Sent to Engineering 125 views 7 comments Most recent by Nick6 October 30

- Graph

