SDAIA Data Science Bootcamp Project
Deliverable # 1: Proposal

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THE DESIGN

Analyze the dataset with an aim to enhance IT staff performance by answering the following questions:

- What affects SLA compliance? How to improve it?
- What affects the resolution time? how to improve it?
- What affects the re-open rate? how to reduce it?

THE DATASET

Dataset

Incident Response Log - ServiceNow Platform Tickets

Context

An event log of an incident management process extracted from data gathered from the audit system of an instance of the ServiceNowTM platform used by an IT company.

Content

The event log is enriched with data loaded from a relational database underlying a corresponding process-aware information system. Information was anonymized for privacy.

Number of instances: 141,712 events (24,918 incidents).
Number of attributes: 36 attributes (1 case identifier, 1 state identifier, 32 descriptive attributes, 2 dependent variables)

THE ALGORITHMS

Some features engineering should be conducted such as:

- Calculating the overall resolution time
- Relating the categories and subcategories
- Relating the assignee to the assigned group
- Creating Date and Time attributes from the datetime attributes

Afterwards, assessing the models' alternatives and select the suitable one for the problem

THE TOOLS

EDA: Pandas, Numpy
Modeling: Keras, SciKit-Learn
Visualization: matplotlib, seaborn