



An evaluation of BERT applied for AIOps

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An evaluation of BERT applied for AIOps

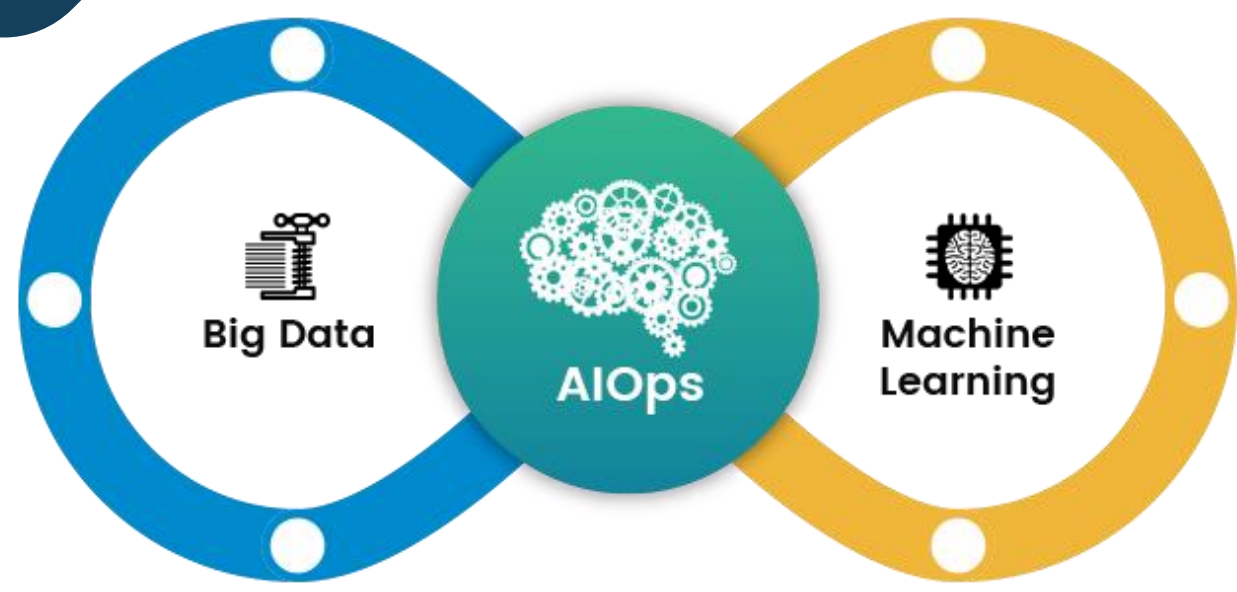


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Artificial Intelligence for IT Operations (AIOps)



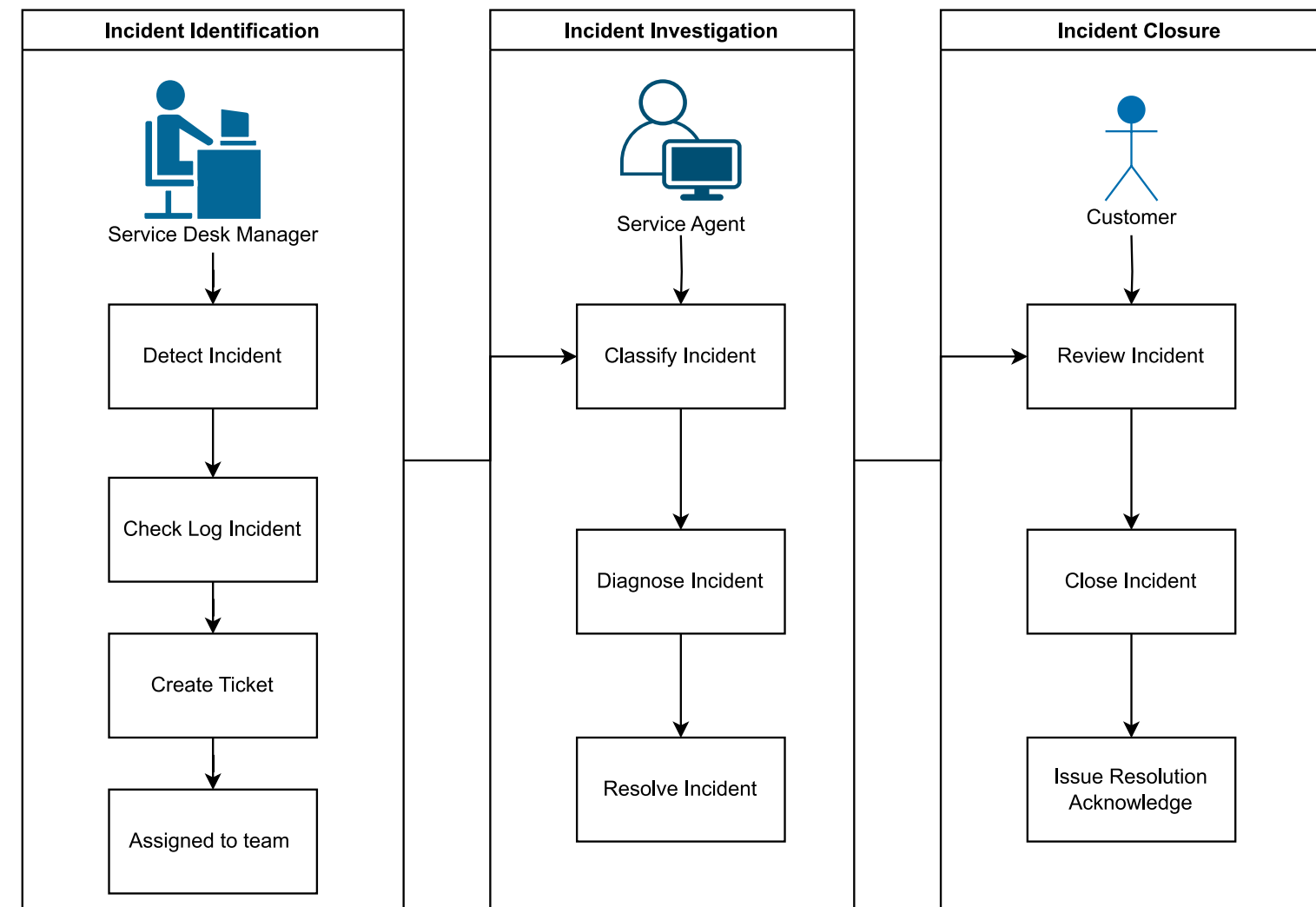
AIOps

AIOps is the application of artificial intelligence capabilities, such as natural language processing and machine learning models, to automate and streamline operational workflows.

Severity Prediction

Developed a severity prediction system to classify the Major Incident Records (MIR) and Non-Major Incident Records (NMIR).

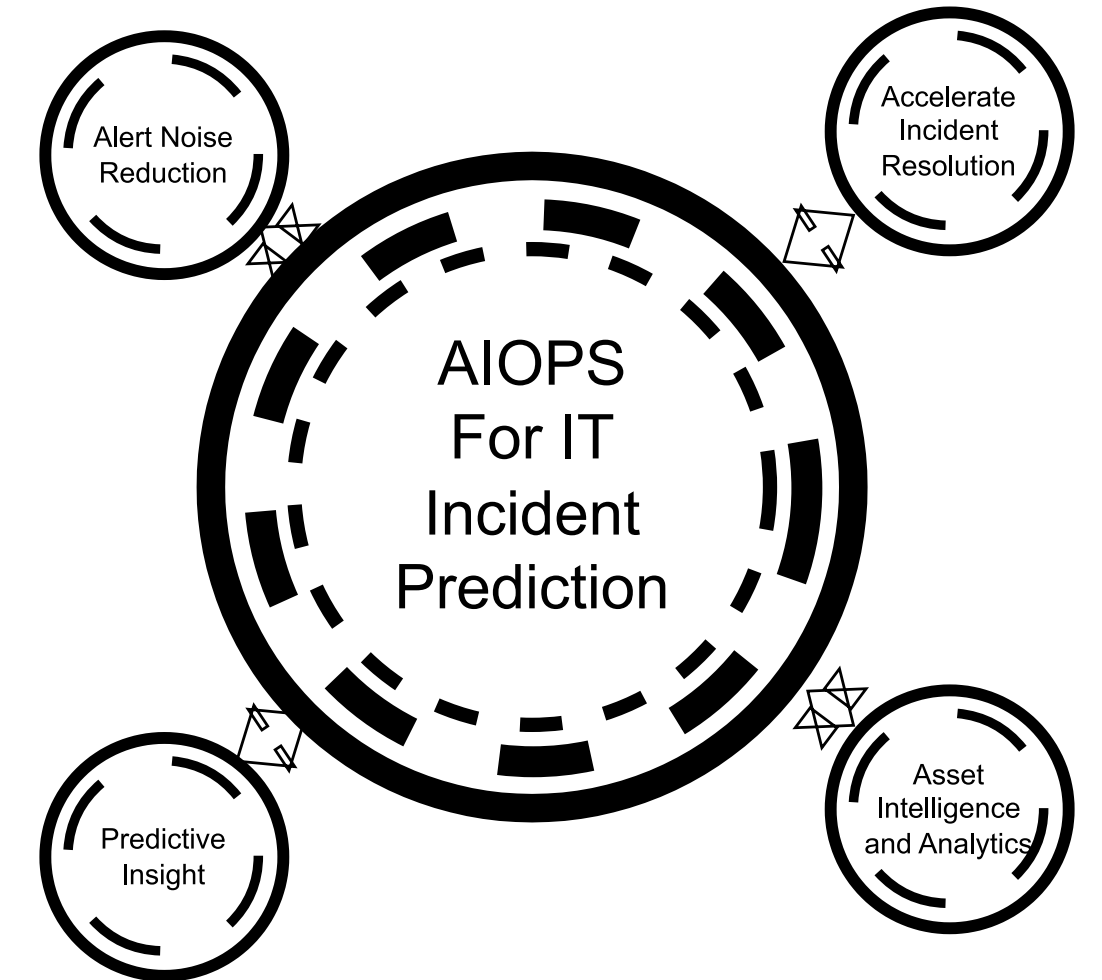
AIOps Traditional IT Service Management System



Assignment Group Allocation

Providing the Prediction for the Assignment of tickets to relevant IT teams /groups

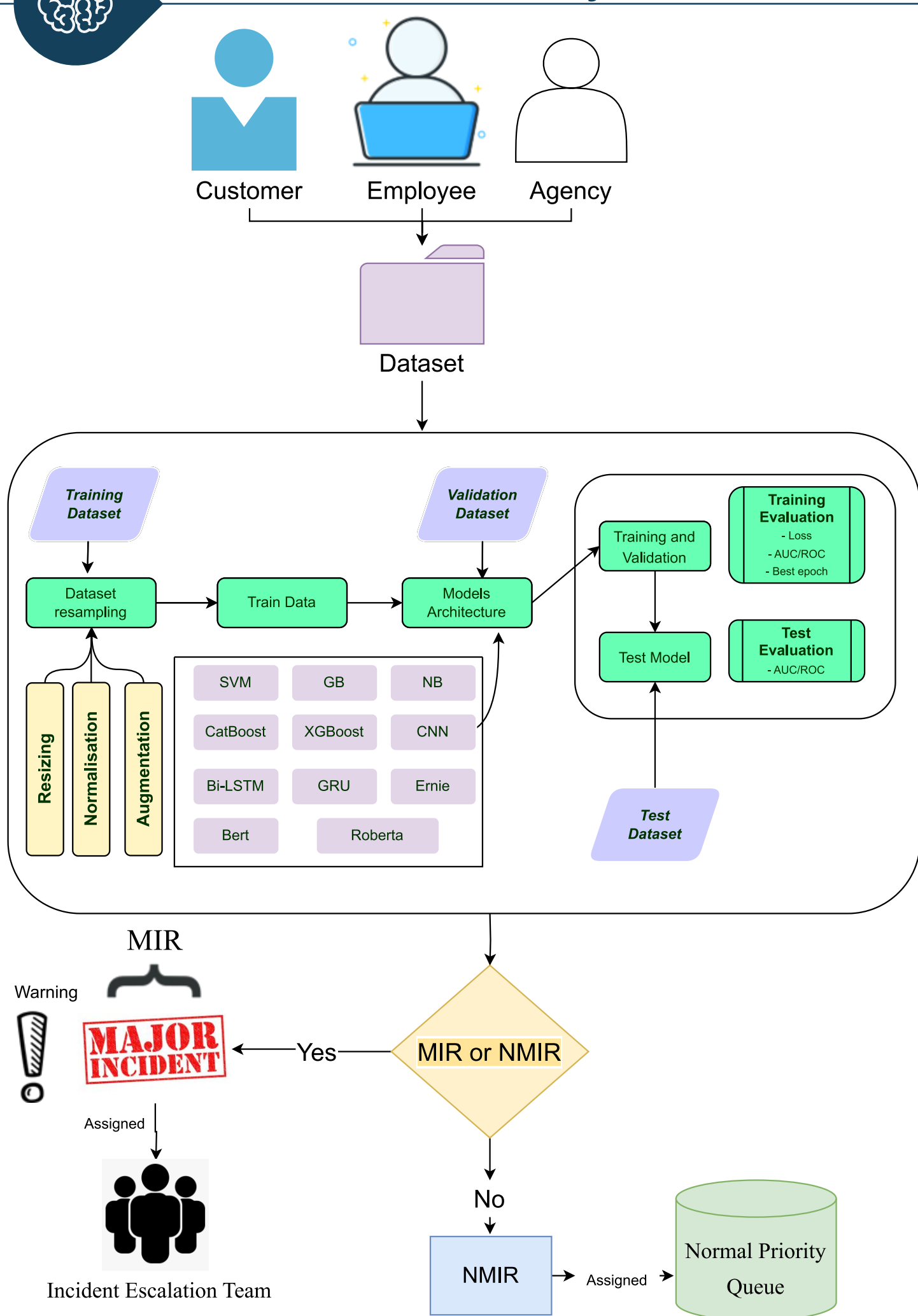
AIOps ITSM Applications



Text Resolution Prediction

For each ITSM Incident outage, provides the text solution to IT Teams.

IT Incident Severity Prediction Framework



Critical Research Gaps and Objectives

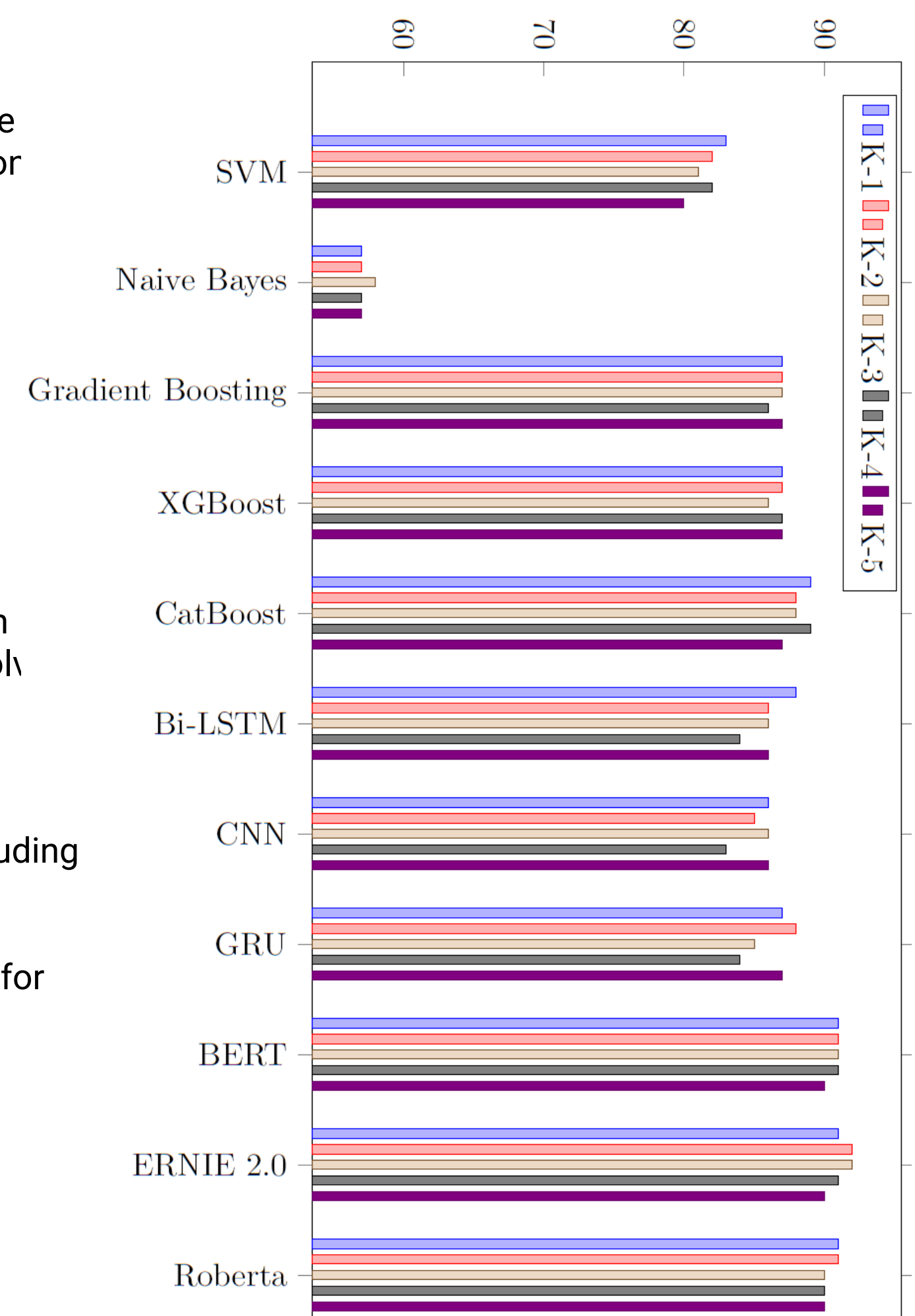
- We have found out that IT incident risk predictions are undermined by imbalanced data. The skew distribution data brings overfitting.
 - The outages can create a deadlock in the system, amplifying the loss of KPI resources.
- ### Proposed Framework
- Predicting when a Major Incident Report (MIR) will be raised from the investigation of incident tickets.
 - Identifying the root cause of the incident and problem tickets allows for the reduction in Mean Time to Resolve (MTTR) an incident.

Approach

- We have used NLP Pipeline for text preprocessing, including Tokenization, Stop words removal and Stemming.
- We have state-of-the-art transformers model like BERT for prediction analysis
- Validate results on the real-time dataset.

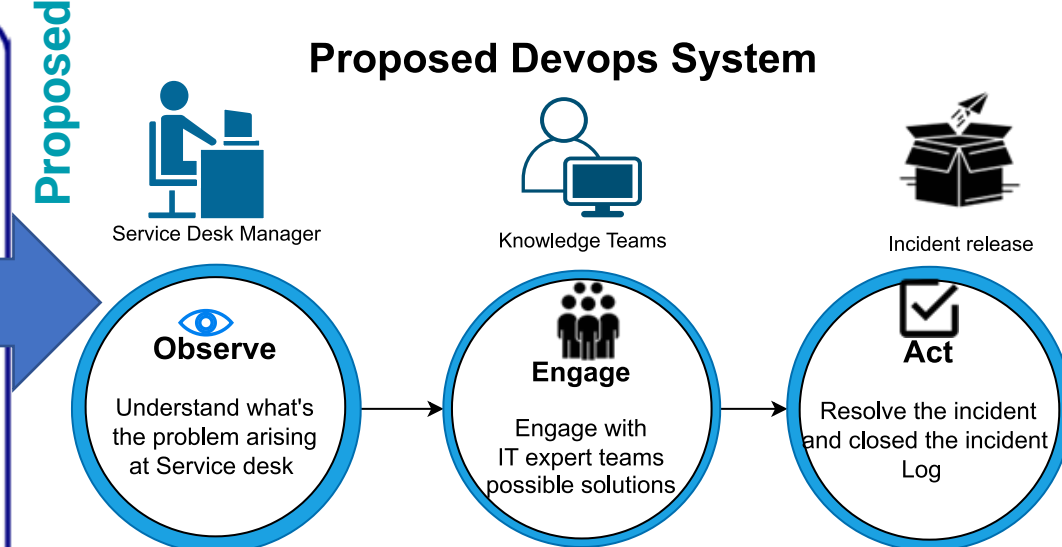
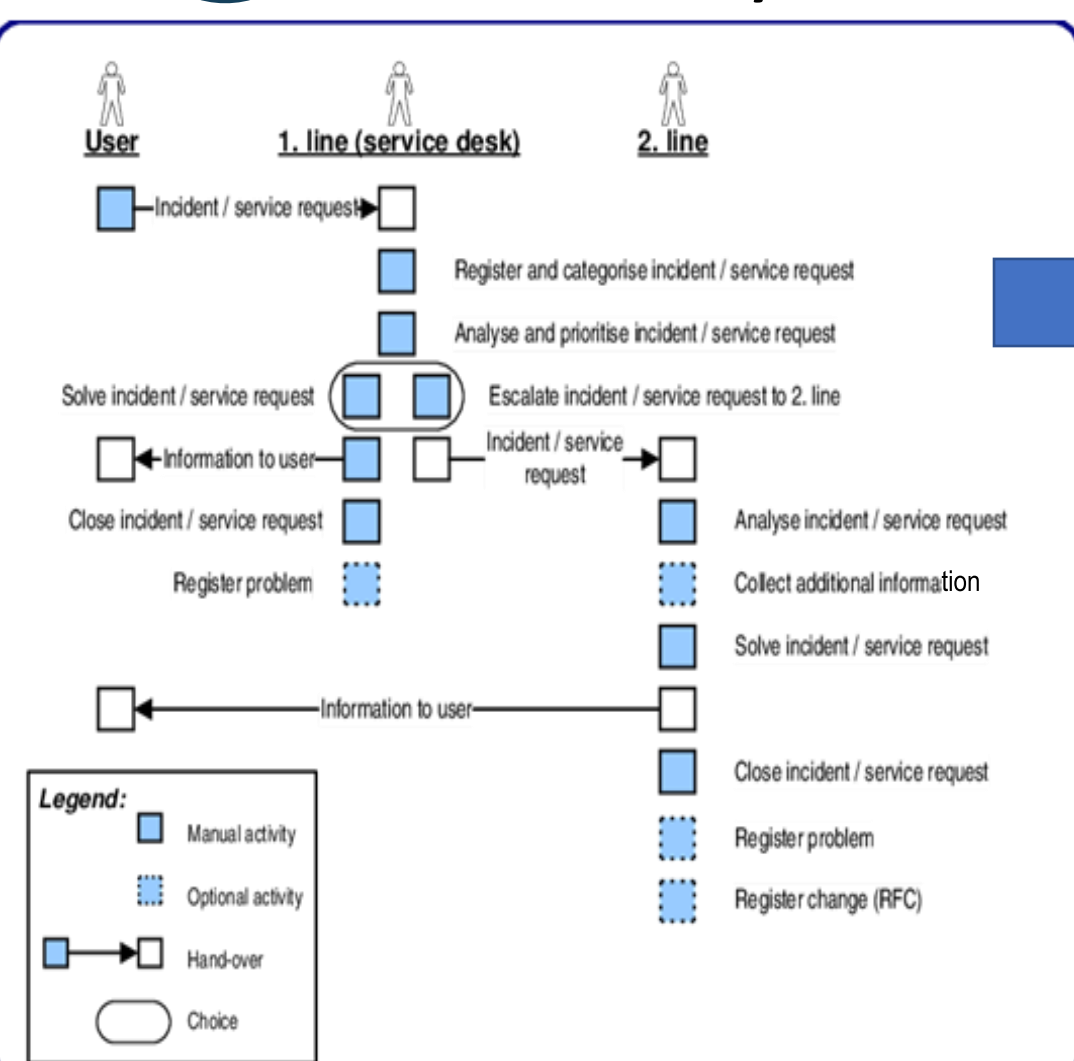
Results

- Higher AUC score
- Lower Mean Time to resolve
- Better Run time results



Knowledge-based Intelligent System for IT Incident DevOps

Traditional System

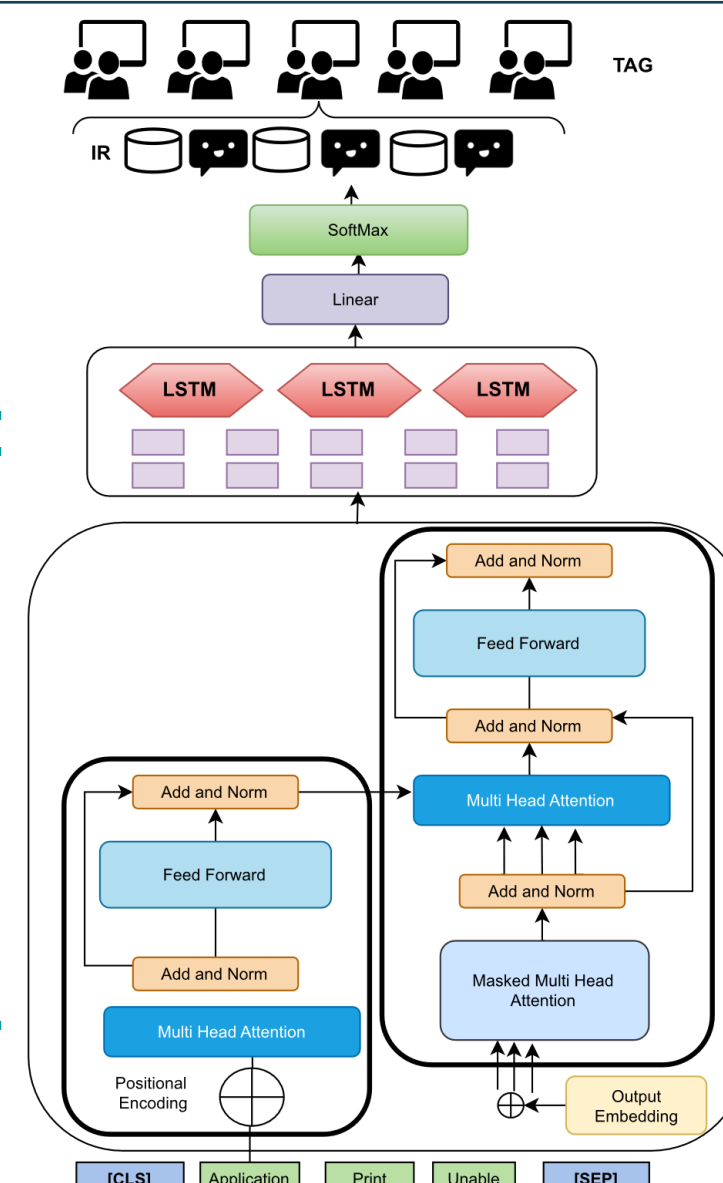


Knowledge Based ITSM System

Providing Automation

- Ticket Assignment Group (TAG)
- Incident Resolution (IR)

Proposed Framework Approach



Results

Our Proposed Transformer Enhanced BERT Approach has outperformed existing Machine Learning and Deep Learning models.

