Orchestrating a brighter world

to further operation



## PERSONALLY IDENTIFIABLE INFORMATION (PII)

NEC'S PII SOLUTION USES MACHINE LEARNING TO EFFECTIVELY IDENTIFY AND REDACT A WIDE RANGE OF PERSONALLY IDENTIFIABLE INFORMATION FROM DOCUMENTS AND TEXT INPUT TO IMPROVE, SIMPLIFY AND SECURE THE MANAGEMENT OF SENSITIVE PERSONAL DATA.



Using Bidirectional Encoder Representations from Transformers based Name Entity Recognition (BERT-NER), our PII solution replaces obsolete multi-language SyntexNet to automatically recognize and redact pertinent information.

Such data can include name, social security, financial account numbers, motor vehicle or driver license, birthday, medical records, images, etc.



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## **PREDICTIVE ARCHITECTURE**

NEC solution replaces traditional rule-based redaction with an AI/ML approach. It works on unstructured and structured data sources and is effective across different domains.

Data from multiple sources are collected and processeds to structured format (CSV/pdf/excel/txt). The BERT-NER model is trained using the collected data. Then the trained BERT-NER model is used to identify and redact specified content based on set criteria.



Model performance and accuracy is measure on:

- > Precision: Relevant instances among the retrieved instances
- > Recall: Relevant instances that were retrieved
- > F1-Score: Based on precision and recall

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