**Abstract**

In this study, we present how we can employ BART, T5 and PEGASUS trained on the conversational text summarisation dataset called SAMSum. The goal is to measure how well the proposed models maintain coverage and coherency in summaries of dialogue information. Leveraging Google Colab with GPU support, we implemented a systematic training and evaluation process, measuring performance with ROUGE scores across four metrics: These evaluating metrics include ROUGE-1, ROUGE-2, ROUGE-L, and ROUGE-Lsummary.From the result comparision,it observed that BART average ROUGE score of 0.009523, T5 average ROUGE score of 0.025985 and PEGASUS average ROUGE score of 0.011731. The outcomes reveal that T5 yielded the best ROUGE scores, which evidences its ability to learn highly relevant dialogue information more effectively and concisely than the competing models, including PEGASUS and BART. At the same time, some issues arise when it comes to improving the level of summarisation and its precision for the informal and dissimilar conversation structure. This study demonstrates that transformer models may improve solutions in industries that involve dialogue summarisation, therefore extending her work to industries like customer service, content moderation, and conversational analytics.