Introduction

Infineon technologies Austria is one of the leading semiconductor companies worldwide. With around 4,820 employ

Introduction to failure analysis

Failure Analysis process?

Detection and localization of faults in semiconductors is a knowledge-intensive and tedious task. To increase the ch
Modern Natural Language Processing methods (NLP) already showed their efficiency in various applications, including
This is why one of the first applications of Artificial Intelligence (AI) tools at the FA laboratory of Infineon consisted on

goal of the project

Problem Definition The goal of this project is to develop a FA report classifier with a BERT model. In order to do
First, we have developed a Language Model based on the state-of-the-art model BERT. Therefore we had to consider ou
Second, we focused on defining the structure of the classifier, which consisted on the BERT network and additional class
Given the nature of this project the two phases were developed in parallel so the joint performance hasn't been tested y

Research Questions This thesis will address the following research questions:
What kind of BERT models already exist
How well do they fit to the Infineon semiconductor domain
What data to use for further training
Evaluation of the resulting model

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general structure of the project

In order to fulfill this goal, an innovative language model trained on the semiconductor domain had to be developed

Structure of the thesis

The following chapters