

# A Tool for Capturing Safety Properties from Critical System Specifications written in SOFL

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Requirements Engineering (RE) plays an essential role in software project success. RE illustrate system behavior such as safety that directly impacts the customer experience. However, literature reported challenges in safety requirements pertaining to several activities including elicitation, analysis, documentation and validation. Therefore, this paper aim to propose a tool for capturing the safety properties from the requirement specifications. The tool is written in SOFL language and compose three main steps; capturing safety-related function, deriving functional scenario from the safety-related function, and deriving safety properties from the functional scenario. For demonstrate the process an Auto-cruise Control (ACC) system for vehicles is presented as case study. The case study has verified that the proposed tool is capable of capturing the safety properties of ACC system.

**Keywords:** safety, safety-critical systems, safety properties, computational intelligence