

**SUPERVISED JAVA TO JAVASCRIPT CODE-TO-CODE
TRANSLATOR WITH RELATIVE POSITION ENCODING
ATTENTION MECHANISM**

Jayamanne Mohottige Don Dilan Dicman

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ABSTRACT

This research aims to develop a transformer-based model for code-to-code translation, specifically from Java to JavaScript. The project will focus on the application of machine learning and natural language techniques to enable the automatic conversion of code from one programming language to another. This project will use a transformer-based model, which is a state-of-the-art neural network architecture that has shown great success in various natural language processing tasks specifically for code translation. This project will utilize a dataset consisting of a parallel corpus of Java and JavaScript introduced by MuST-CoST. The project's success and evaluation will be checked using the BLEU scores optimized for code translation. The outcome of the code translation will ease the developers who are trying to translate a source code written in Java code to JavaScript.

Keywords: code translation, code to code, supervised code translation, code migration, Java - JavaScript

Subject Descriptors:

1. Software Engineering → code migration → Java to JavaScript
2. Computing methodologies → Machine learning → Machine learning approaches → Neural networks → Natural Language Processing → Neural Machine Translations