

Thesis Project Topic: Enhancing Code Generation Security Robustness through Backtranslation in Low-Resource Programming Languages

We are seeking a motivated student to undertake a master thesis project focused on improving the robustness of code generation models for low-resource programming languages by leveraging backtranslation techniques. This project aims to explore how backtranslation, a method commonly used in natural language processing, can be adapted to the domain of code generation to enhance the quality and accuracy of generated code, especially in underrepresented programming languages.

Ideal Candidate:

- Strong interest in the intersections of machine learning, code generation, and low-resource programming languages.
- Basic knowledge of neural network models and machine learning frameworks.
- Strong coding skills and a keen interest in exploring innovative methods for improving model robustness.

If you are passionate about advancing AI-driven code generation and eager to contribute to this exciting research project, please contact derui.zhu@tum.de with your resume and transcript.