

This thesis introduces a Python-based tool designed to generate diverse and original problem assignments in formal languages theory, encompassing tasks such as determinization, the CYK problem, and conversion to a proper CFG. The tool allows the specification of desired properties for the generated problem assignments. Moreover, it allows us to facilitate the creation of variations of these assignments, ensuring their reuse across different exam dates. Each problem assignment includes a detailed report that covers the solving process, problem properties, and final solution, all formatted in LaTeX for easy integration into educational materials. Utilizing JSON configuration files, the tool offers flexibility and supports the seamless addition of new problems. By addressing challenges in the problem generation and solution validation, this tool serves as a valuable resource for enhancing teaching and assessment of formal languages theory.