AI based SWOC analysis of student using academic progress

Vishwakarma Institute of Information Technology
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Guide: Prof. Priya Shelke

Abstract

It is time consuming and difficult to analyze your weaknesses and come up with a good solution. At the same time some students do not know the concrete areas where they should improve themselves since the number of academic jobs required them time to finish their assignments. Furthermore, without explicit guidance from the teacher, students cannot figure out the hierarchy of improvement or which source is good or not. Furthermore, students may have difficulty noticing their own long-term growth when they have no benchmarks against which to measure their efforts - it may appear that their efforts aren't yielding the results they want. Without opportunities for self-reflection or personal feedback, students may be left wondering what they should do next, how to overcome their current difficulties, and so on.

This project will focus on achieving a general web application that will enable students to self-assess their studies and get insights via a SWOC (Strengths, Weaknesses, Opportunities and Challenges) analysis. Through a machine learning algorithm, the analysis of the students' performance shall be conducted based on different parameters such as examinations performance, participation in competitions, project success rate among others and a grade will be given to the students respective to their performance. SWOC analysis will give specific, personalized recommendations to help students learn where they excel and where they struggle. Through this analysis, students will be able to allocate their efforts more wisely. The platform will also provide continuous progress reports in the form of dynamic visualizations of academic progress over time. Further, the application will include a chatbot system for the students to ask questions regarding improvements and different pathways which they can follow to achieve their dreams.