**Title: Plagiarism Detection: A Socio-Economic Perspective in Engineering**

* **Project Domain:** In digital world, information is widely available and easily accessible. This make it more important than ever to ensure originality, especially in academics, professional work, and creative fields, the ease of copying content from the internet, plagiarism has become increasingly common. The word plagiarism refer to taking material authored by others and presenting it as one's own. Plagiarism is both illegal and unethical that violates the right of original creators and diminishing the value of authentic work.

My project domain play a crucial role in maintaining academic integrity and ethical content creation. The impact of plagiarism extended beyond individual dishonesty, influencing industry such as publishing, journalism, and software development. This project is deeply connected to society, as it addresses the growing need for original work and fosters a culture of integrity and accountability in knowledge-based sectors.

* **Problem Statement and Probable Solution from a Social Science Perspective:** With the exponential growth of online resources, plagiarism has become a common issue due to a lack of awareness, time constraints, and weak detection mechanisms. This unethical practice not only compromises academic and professional standards but also leads to financial losses even lack of plagiarism detection system leads to a devaluation of genuine work, discouraging innovation and honest effort.

To address this, Nirikṣaṇam is an AI-powered plagiarism detection system that ensures content originality using advanced algorithms. However, tackling plagiarism require more than detection which needs awareness, education, and policy enforcement. Integrating plagiarism detection tools in academic and professional settings, along with ethical content creation programs, promotes originality. Institutions must enforce strict policies with clear consequences while providing resources for proper citation and paraphrasing. This approach fosters integrity, innovation, and a culture that values genuine work.

* **Engineering Solution for the Problem Statement**

1. A statistical keyword extraction algorithm like YAKE that helps identify concepts in the text, enabling the system to focus on potential sources for content overlap.
2. A Python library like Beautiful Soup, that retrieves and parses online content, expand search beyond local documents to include publicly available information.
3. A transformer-based model like USE, that converts sentences into high-dimensional vectors, to detect paraphrased content.
4. A tool for structural pattern comparison that detects direct matches and content duplication.

By integrating these engineering solutions, the project aims to provide a reliable and scalable plagiarism detection tool that ensures accuracy and ease of use in academic and professional settings.

* **Project Outcome as Engineering Economy:** From an engineering economy perspective, the implementation of plagiarism detection systems results in several economic benefits:

1. Cost Reduction: Minimizes legal disputes and copyright infringement expenses in academia and publishing.
2. Enhanced Productivity: Promotes credible research, benefiting institutions and organizations.
3. Market Expansion: Growing demand for plagiarism detection tools creates economic opportunities.
4. Sustained Innovation: Encourages original content creation, driving technological and economic growth