SYNOPSIS – CERTIFY

Aim: The aim of this project is to reduce the work and time load taken during the process of preparing the certificates and further verifying the authenticity of the certificates.

Motivation to choose the topic: As the member of Graphics designing team, we know it takes a lot of time to generate multiple Certificates/Invitation even when the template is same and only few details change.

Summary and Working of Project

The user can upload or select a certificate template and upload spreadsheet with data of people for whom the certificate is to be created. Once that is done, through data analysis, all the columns and respective value will be read. In our UI, the text fields will be available. User can drag, drop and resize the Text fields on the certificate template and choose the Font, size and colour. After clicking generate, through image processing, for each data value a separate image will be created and user will be able to download them all. A unique authentication key will also be provided to the certificate so that the authenticity of certificates can be verified.

Scope of the project

The future scope of this project is applicable to many Organizations and Institutions. Through this people can generate a large number of certificates by just using the template and user details in a spreadsheet. Later the user can also verify the generated Certificate's authenticity.

Technologies used

1. Image Processing

In computer science, **digital image processing** is the use of computer algorithms to perform image processing on digital images As a subcategory or field of digital signal processing, digital image processing has many advantages over analog image processing. It allows a much wider range of algorithms to be applied to the input data and can avoid problems such as the build-up of noise and signal distortion during processing.

Through Image processing, we will be adding the unique details like Name etc. on the Certificate Template

2. Data Analysis

Data analysis is a process of inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains.

Through Data Analysis, we will read the details from a spreadsheet and for each different value, it will generate a unique image of Certificate.

Software Requirements

NodeJs: To support website back-end

Jimp: Image Processing Library

Pandas: Data Analysis Library

Express: Web framework for API

MongoDB: For Database

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