

Moto Engine Pro - Project Documentation

Overview

Moto Engine Pro is a lightweight, web-based calculator toolkit designed specifically for motorcycle engine enthusiasts, engineers, and tuners. It offers four powerful tools to perform essential engine computations with precision and ease:

- Engine Displacement Calculator
- Compression Ratio Calculator
- Camshaft Timing Calculator
- Horsepower Calculator

This application is entirely frontend-based and requires no backend or server-side processing. It operates smoothly in modern web browsers and is built with vanilla HTML, CSS, and JavaScript.

Project Structure

File	Description
index.html	The main homepage interface linking to all calculators
displacement.html + displacement.js	Tool for calculating engine displacement
compression.html + compression.js	Tool for computing compression ratios
camshaft.html + camshaft.js	Tool for analyzing camshaft timing
horsepower.html + horsepower.js	Tool for estimating horsepower
style.css	Common stylesheet for all pages (supports dark/light mode)
script.js	Script handling shared UI functionality like dark mode and transitions

Features

- Dark/Light Theme Toggle
Easily switch between dark and light display modes using a toggle button for better accessibility and comfort.
- Interactive Charts
Visualize camshaft data and horsepower output through dynamic, user-friendly charts using native JavaScript.
- Zero External Dependencies
The app does not rely on third-party libraries, ensuring fast load times and offline compatibility. Only Google Fonts are externally sourced for aesthetics.

Usage Instructions

1. Launch the Website

Open the index.html file in any modern web browser (Chrome, Firefox, Edge).

2. Navigate to a Calculator

Select any of the four calculators from the home page.

3. Input Engine Data

Enter the required values into the form fields.

4. Calculate

Click the "Calculate" button to view results.

5. Reset

Use the "Clear" button to reset the form and start over.

Browser Compatibility

Moto Engine Pro is tested and works reliably on the latest versions of:

- Google Chrome
- Mozilla Firefox
- Microsoft Edge

No installation or extensions are needed. The application runs purely in the browser and is mobile-friendly with responsive layout considerations.

License and Distribution

This project is free for personal and educational use.