Smart *Portfolio* Creator

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SECTION 01

What Is This Tool?

The **Smart Portfolio Creator** (internally "PortSmart") is an end-to-end DIY equity portfolio workflow for the Indian market: screen sectors and stocks by fundamentals, assemble a weighted portfolio, optionally let the tool simulate or optimise the weights for you, and then backtest the result against a Nifty 50 proxy using real historical prices — all before you commit a single rupee.

It is built on a fundamentals and price-history pipeline covering thousands of BSE- and NSE-listed companies (see Section 10 for exactly what that data is and isn't). The tool takes you through three screens in sequence: **Sectors → Stocks/Portfolio → Backtest.**

Who should use this tool?

Retail investors who want to build a rules-based, fundamentals-screened equity portfolio without a broker's recommendation; MBA students studying portfolio construction and the efficient frontier; anyone who wants to sanity-check "would this basket of stocks have actually performed well?" before allocating capital to it.

What this tool is not

This is a screening, construction and backtesting tool — not personalised investment advice. It does not place trades, does not know your personal financial situation, and its historical backtest is not a guarantee of future performance.

SECTION 02

Quick Start

You can go from zero to a backtested portfolio in a few minutes.

1 **PICK SECTORS**

On the Sectors screen, select one or more sectors (or type a natural-language filter like "avg roe above 20") and click "Continue to stock list."

2 **ADD STOCKS AND SET WEIGHTS**

Narrow the stock table with another natural-language filter if you like, add stocks to your portfolio, and set a weight for each until the allocation bar reads 100%.

3 **OPTIONALLY SIMULATE OR OPTIMISE**

Use "Simulate 1000 portfolios" to see what a large batch of random weightings across your shortlist would have achieved, "Set all weights equal," or "Sharpe Ratio Optimise" to let the tool solve for the weights with the best historical risk-adjusted return.

4 **SAVE AND BACKTEST**

Click "Save & run backtest" (Trial/Premium — see Section 11) or "Run backtest" (Free tier, no save) to see your portfolio's historical performance against the Nifty 50 proxy, with CAGR, volatility, Sharpe ratio and max drawdown.

SECTION 03

Screen 1 — Browsing Sectors

The first screen groups every covered company into sectors (and industries within each sector), showing aggregated fundamentals for each group so you can decide where to shortlist stocks from.

SECTOR CARDS	**One tile per sector.** Click to select/deselect. Use "Select all sectors" to start from the full universe, or select just one or two sectors to concentrate your shortlist (e.g. Financial Services, IT, FMCG).
NATURAL-LANGUAGE FILTER	**Type a plain-English screen** like "avg roe above 20" or "avg pe below 15 and avg npm above 15". The filter is evaluated against each sector's **average** PE, ROE, or NPM across all its constituent companies — it narrows which sector tiles are shown, it does not touch individual-stock filtering (that happens on Screen 2). Supported metrics at sector level: avg PE, avg ROE, avg NPM.

> 💡 You don't have to filter by sector at all — selecting "Select all sectors" and doing all your filtering with fundamentals on the stock screen (Screen 2) works just as well. Sector filtering is mainly useful when you already have a thesis (e.g. "I want a portfolio concentrated in high-ROE FMCG names").

SECTION 04

Screen 2 — Building Your Portfolio

This screen lists every company in your selected sector(s) with sortable fundamentals, and a "ledger" panel on the right where you assemble your actual portfolio.

STOCK TABLE	**Company · Sector/Industry · Market Cap (₹ Cr) · PE · PB · ROE % · NPM %**, each column sortable by clicking its header. Click

"Add" on any row to add that stock to your portfolio ledger.

NATURAL-LANGUAGE FILTER	Same idea as Screen 1 but at the individual-stock level, e.g. "pe below 10 and roe above 20" or "pb below 3". Filters the visible stock table in place — your already-added holdings stay in your portfolio regardless of the current filter. Supported metrics at stock level: PE, PB, ROE, NPM.
WEIGHT %	Enter a weight (0–100) for each added stock. The ledger's allocation bar and percentage total update live. You must reach exactly 100% (±0.05%) before you can save or backtest.
HOLDINGS COUNT / ALLOCATION BAR	The ledger panel tracks how many stocks you've added and what fraction of 100% is allocated so far — a quick visual check that you haven't over- or under-allocated.

SECTION 05

Simulate, Split Equal & Optimize

Three helper actions in the ledger panel let you skip manual weight-guessing:

Set All Weights Equal

Instantly splits 100% evenly across every stock currently in your portfolio — the simplest possible weighting scheme (1/N), and a reasonable, well-studied baseline to compare more sophisticated weightings against.

Simulate 1000 Portfolios

Available for up to 10 candidate stocks. Runs 1,000 random long-only weight combinations across your shortlist using historical monthly returns, and reports the best one found by Sharpe ratio — expected return, volatility, and Sharpe ratio — so you can see the range of outcomes a naive random search would have produced.

Sharpe Ratio Optimise

Solves directly for the weight combination (across your current holdings, minimum 2 stocks) that historically maximised the Sharpe ratio — expected return in excess of the risk-free rate, per unit of volatility. This is a proper optimisation, not a random search, so it typically finds a better (or at least equal) result than "Simulate."

Both are historical, not predictive

"Simulate" and "Optimise" both search over *past* monthly price behaviour. A weighting that maximised historical Sharpe ratio is not guaranteed to do so going forward — treat both as analytical starting points, not a forecast.

SECTION 06

Screen 3 — Reading the Backtest

Once your portfolio reaches 100% allocation, "Save & run backtest" (or "Run backtest" on Free tier) takes you to the results screen: four stat tiles, a cumulative-return chart against the Nifty 50 proxy, and a sector allocation breakdown.

CAGR	**Compound Annual Growth Rate** of your portfolio over the backtest window (24 months by default, or "since creation" for a saved portfolio once eligible — see below). Annualised from the portfolio's actual monthly price path.
VOLATILITY	Annualised standard deviation of the portfolio's monthly returns — the backtest's measure of risk. Higher volatility means a bumpier ride to the same (or different) end return.

SHARPE RATIO	**(CAGR − risk-free rate) ÷ Volatility.** The risk-free rate is fixed at `7.0% (10Y G-Sec)` across the whole tool. A Sharpe ratio above 1 is generally considered good; above 2, very good. Use it to compare portfolios of different risk levels on a level footing.
MAX DRAWDOWN	The largest peak-to-trough decline in the portfolio's cumulative value over the backtest window — a measure of the worst pain an investor holding this exact portfolio would have experienced, independent of where the window ends.
24-MONTH VS. "SINCE CREATION" WINDOW	The default backtest window is a fixed trailing 24 months. Once a portfolio has been saved and is old enough to have a meaningful history, the "Since creation" toggle re-runs the backtest from the exact date you first saved it — useful for tracking how a portfolio you actually committed to has performed since you built it, rather than an arbitrary lookback.
CHART & UNDERLYING TABLE	The cumulative-return chart indexes both your portfolio and the Nifty 50 proxy to 100 at the start of the window, so the two lines are directly comparable regardless of starting price levels. Click "View underlying values as a table" to see the exact monthly index values behind the chart.
ALLOCATION BY SECTOR	Rolls your individual stock weights up to the sector level — a quick concentration check (e.g. "am I secretly 70% Financial Services?").

SECTION 07

Saving, Editing & the 1-Week Lock

A **saved portfolio** is a named snapshot of your holdings and weights that persists across sessions and can be reloaded, backtested again later, or compared against your other saved portfolios.

1 **NAME IT (MAX 10 CHARACTERS)**

Reach 100% allocation and click "Save & run backtest." You'll be prompted for a short portfolio name if you haven't already chosen one from the dropdown.

2 **FREELY EDIT WITHIN THE FIRST WEEK**

For 7 days after a portfolio is first saved (or after its most recent edit — each edit resets the 7-day window), you can reopen it and change holdings/weights, then save again to update it in place.

3 **LOCKED AFTER 1 WEEK — COPY OR DELETE ONLY**

Once the edit window has passed, the portfolio becomes read-only: its holdings can no longer be changed directly. Use "Copy to new portfolio" to branch off a fresh, editable copy with the same starting holdings, or "Delete portfolio" to remove it. This lock exists so "Since creation" performance tracking reflects a portfolio you actually committed to, not one that was silently reshuffled after the fact.

4 **COMPARE ALL PORTFOLIOS**

From the ledger panel, "Compare all portfolios" runs the same backtest window across every portfolio you've saved and lists CAGR and Sharpe ratio for each side by side.

SECTION 08

Core Concepts Explained

Fundamentals Screening

PE (price ÷ earnings), PB (price ÷ book value), ROE (return on equity) and NPM

Diversification & Sector Concentration

Spreading holdings across sectors reduces the risk that one industry's downturn (net profit margin) are classic value/quality screens. Low PE/PB with high ROE/NPM is a common "quality at a reasonable price" heuristic — though no single metric tells the whole story for any one company.

dominates your portfolio's return. The "Allocation by sector" panel on the backtest screen is the tool's built-in concentration check.

Sharpe Ratio

The standard measure of risk-adjusted return: excess return (over the risk-free rate) per unit of volatility. Both the "Optimise" feature and the backtest stat tiles use it, so it's the common currency for comparing any two portfolios or weighting schemes in this tool.

Backtesting

Applying a strategy (here, a fixed set of weights) to historical price data to see how it would have performed. Backtesting is a sanity check, not a prediction — see Section 10 for the specific limitations of this tool's backtest.

SECTION 09

Business Applications

→ **DIY portfolio construction.** Build a fundamentals-screened basket of Indian equities without relying on a broker's model portfolio, and see its historical behaviour before allocating real capital.

→ **Thesis testing.** "I think high-ROE FMCG names would have outperformed" — screen for exactly that basket and backtest it against the Nifty 50 proxy to see if the thesis holds up historically.

→ **Portfolio theory coursework.** MBA students can build several portfolios (equal weight, Sharpe-optimised, sector-concentrated) and compare their backtested risk/return profiles — a hands-on complement to Markowitz mean-variance theory.

→ **Ongoing tracking.** Save a portfolio, revisit it periodically, and use "Since creation" to see how it has actually performed since the day you committed to it.

SECTION 10

Data & Methodology Notes

Read this section before trusting the backtest numbers with real capital decisions.

Returns are price-only

Both the portfolio backtest and the Nifty 50 proxy are computed from monthly *closing prices only* — dividends are not included. A dividend-heavy portfolio's true total return will understate relative to a low-dividend, high-growth portfolio in this backtest.

"Nifty 50" is a proxy, not the official index

The benchmark line is a market-cap-weighted basket of roughly 50 large-cap constituents built from this tool's own derived market-cap figures — it is *not* the official free-float-weighted NSE Nifty 50 index. Treat it as directionally representative of large-cap India performance, not as an exact tracking benchmark.

Data refreshes on a schedule, not in real time

Fundamentals (PE/PB/ROE/NPM, sector classification) and price history are refreshed by a scheduled pipeline, not streamed live: fundamentals roughly monthly, prices weekly. Numbers you see reflect the most recent pipeline run, not the current live market.

SECTION 11

Saving Portfolios & Exporting PDFs

Screening, building, simulating, optimising and backtesting are all **fully available at every tier**, including Free — nothing about the analytical workflow itself is gated. Only two things require a paid plan: persisting a portfolio across sessions, and exporting a PDF report.

FEATURE	FREE	TRIAL	PREMIUM
Screen, Build, Simulate, Optimise, Backtest	✓ Unlimited	✓ Unlimited	✓ Unlimited
Save Portfolio	✗ Not available	Up to 3 portfolios	✓ Unlimited
Load / Compare Saved Portfolios	✗ Not available	✓ All saved portfolios	✓ All saved portfolios
Export Backtest PDF	✗ Not available (Premium only)	✗ Not available (Premium only)	✓ Unlimited

Exporting a Backtest PDF

Premium users see an "Export PDF" button on the backtest results screen. It generates a formatted A4 landscape report entirely in your browser via jsPDF — no data leaves your session — containing the CAGR/volatility/Sharpe/max-drawdown stat bar, a snapshot of the cumulative-return chart, and a full table of portfolio holdings (code, company, sector, weight). Suitable for investment committee decks or MBA coursework submission without further editing.

Trial — up to 3 saved portfolios

During a Trial, save up to three distinct portfolios. Editing an existing one within its 1-week window doesn't consume an additional slot. When all three are used, delete one, or upgrade to Premium for unlimited saves and PDF export.

Premium — unlimited saves + PDF export

Save as many portfolios as you want to track — e.g. one per sector thesis, one equal-weighted baseline, one Sharpe-optimised — and export a shareable PDF backtest report for any of them.

SECTION 12

Glossary of Terms

TERM	DEFINITION	IN THIS TOOL
PE Ratio	Price-to-Earnings. Share price divided by earnings per share; a common valuation multiple.	Sector avg. filter & stock-level filter/sort column.
PB Ratio	Price-to-Book. Share price divided by book value per share.	Stock-level filter/sort column.
ROE	Return on Equity — net income ÷ shareholders' equity. A profitability/efficiency measure.	Sector avg. filter & stock-level filter/sort column.
NPM	Net Profit Margin — net income ÷ revenue.	Sector avg. filter & stock-level filter/sort column.
Market Cap	Share price × shares outstanding — the total market value of a company's equity.	Stock table column, sortable. Derived, not directly fetched — see CLAUDE.md pipeline notes.
CAGR	Compound Annual Growth Rate — the constant annual rate that would take a starting value to an ending value over a given period.	Primary backtest return metric.
Volatility	Annualised standard deviation of periodic returns — the standard measure of risk.	Backtest stat tile.
Sharpe Ratio	(Return − risk-free rate) ÷ Volatility — risk-adjusted return.	Backtest stat tile; objective function for "Optimise."
Max Drawdown	The largest peak-to-trough decline in cumulative value over a period.	Backtest stat tile.

TERM	DEFINITION	IN THIS TOOL
Risk-Free Rate	The theoretical return of a zero-risk asset, used as the baseline in Sharpe ratio.	Fixed at 7.0% (10Y G-Sec) throughout the tool.
Backtest	Simulating a strategy against historical data to evaluate how it would have performed.	Screen 3, against monthly closing prices.
Nifty 50 Proxy	A stand-in benchmark, not the official index — see Section 10.	Benchmark line on the backtest chart.