

POWER BI

DAX Quickstart Pack

7 Production-Ready DAX Patterns · 5 Bonus Tricks

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By **Gaurav Kumar Vishvakarma**
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■ Built for Data Analysts, BI Developers & Power BI Beginners-to-Intermediate

Hi, I'm Gaurav ■

I'm a Freelance Data Analyst and Power BI Developer with 4+ years of experience building enterprise dashboards for 200+ buy-side and sell-side BFSI clients at Acuity Knowledge Partners — and continuing as an independent consultant.

This Quickstart Pack contains the **exact DAX patterns I use in 90% of my real Power BI projects**. Copy-paste them, adapt them, and ship better dashboards this week.

What's Inside

- ✓ **7 Production-Ready DAX Patterns** — Time Intelligence, Top N + Others, Dynamic Switch, Running Totals, Last Refresh, % of Parent, Sparkline-Friendly
- ✓ **5 Performance Tuning Tricks** — cut report load time by 40-60% on average
- ✓ **Pre-Launch Dashboard Checklist** — 15 items to verify before sharing any Power BI report
- ✓ Real-world examples I built at Acuity Knowledge Partners (BFSI)
- ✓ Zero theory, zero fluff — only what works in production

How to Use This Pack

Open Power BI Desktop. Pick the pattern that matches your need. Copy the DAX. Adapt table/column names. Test in a small file first. Ship. That's it.

Pattern 1: Time Intelligence Foundation

Use case: Year-over-year, month-to-date, prior-year comparisons. The #1 most reused DAX category.

```
// Base measure
```

```
Total Sales = SUM(Sales[Amount])
```

```
// Year-to-Date
```

```
Sales YTD =  
TOTALYTD([Total Sales], 'Date'[Date])
```

```
// Prior Year (Same Period Last Year)
```

```
Sales PY =  
CALCULATE([Total Sales],  
    SAMEPERIODLASTYEAR('Date'[Date]))
```

```
// Year-over-Year %
```

```
YoY Growth % =  
DIVIDE([Total Sales] - [Sales PY],  
    [Sales PY], 0)
```

■ **Pro Tip:** ALWAYS mark a proper Date dimension table as a date table (Modeling → Mark as Date Table). Without it, Time Intelligence silently breaks.

Pattern 2: Top N + Others Bucket

Use case: Show top 5 products/clients while bucketing the rest as 'Others' — without filtering them out.

```
Sales Top 5 + Others =  
VAR ProductRank =  
    RANKX(ALLSELECTED(Product[Name]),  
        [Total Sales],, DESC)  
RETURN  
    IF(ProductRank <= 5,  
        SELECTEDVALUE(Product[Name]),  
        "Others")
```

Pattern 3: Dynamic Switch Measure Selector

Use case: One chart, multiple metrics. Let users pick via slicer.

```
// 1) Create disconnected Measure Table:  
// MeasureName | MeasureID  
// "Total Sales" | 1  
// "Total Profit" | 2  
// "Order Count" | 3  
  
Selected Measure =  
SWITCH(  
    SELECTEDVALUE('Measure Selector'[MeasureID]),  
    1, [Total Sales],  
    2, [Total Profit],  
    3, COUNTROWS(Sales),  
    BLANK())
```

■ **Pro Tip:** Use **SELECTEDVALUE** (not **MAX**) so the measure returns **BLANK()** when multiple items are selected — cleaner UX than throwing an error.

Pattern 4: Running Total Within Year

Use case: Cumulative sales by month — but resets when year changes.

```
Sales Running Total =  
CALCULATE([Total Sales],  
    FILTER(ALL('Date'),  
        'Date'[Date] <= MAX('Date'[Date])  
        && 'Date'[Year] = MAX('Date'[Year])))
```

Pattern 5: Last Refresh Timestamp

Use case: Show 'Data last refreshed: 12 Jun 2026, 14:30 IST' on every dashboard page. Sounds basic — 90% of dashboards I audit don't have it. Stakeholders question data freshness without it.

```
Last Refresh =  
"Data last refreshed: " &  
    FORMAT(NOW(), "dd MMM yyyy, HH:mm") & " IST"
```

■ **Pro Tip:** Drop the Last Refresh measure into a Card visual, anchor it to your dashboard header. Trust signal restored.

Pattern 6: % of Parent / % of Total

Use case: Show what % each category contributes to the whole — respecting outer slicers.

```
Sales % of Total =  
DIVIDE([Total Sales],  
    CALCULATE([Total Sales],  
        ALLSELECTED(Product[Category])))
```

■ **Pro Tip:** ALLSELECTED (not ALL) respects outer slicers like Year. Difference: "% of all products EVER" vs "% of products in current view".

Pattern 7: Sparkline-Friendly Measure

Use case: Power BI native sparklines (2022+) need measures that aggregate across row context — especially with multiple date relationships (Order Date, Ship Date, Delivery Date).

```
Sales Sparkline Value =  
CALCULATE([Total Sales],  
    USERELATIONSHIP('Date'[Date],  
        Sales[OrderDate]))
```

■ Bonus: 5 Performance Tuning Tricks

After auditing 50+ slow Power BI reports, 80% of the time the bottleneck is one of these:

- **1. Replace FILTER inside CALCULATE** with simple Boolean filter when possible.

BAD: CALCULATE([Sales], FILTER(Product, Product[Cat]="A"))

GOOD: CALCULATE([Sales], Product[Cat]="A")

- **2. Convert Calculated Columns → Measures** when possible.
Calculated columns consume RAM at refresh. Measures compute on demand.
- **3. Avoid Bi-Directional Relationships** unless absolutely necessary.
Creates filter cycles → exponential query complexity.
- **4. Always Mark Your Date Table** (Modeling → Mark as Date Table).
Without it, Time Intelligence functions quietly produce wrong results.
- **5. Reuse Variables** for expensive calculations.
VAR x = SUMX(...) — compute once, use multiple times in same measure.

■ Real impact: I used these to cut Acuity's tracker dashboards from **18 seconds** → **7 seconds** on initial load.

■ Pre-Launch Dashboard Checklist

Before sharing any Power BI report with stakeholders, verify all 15 items:

- 1. Data model uses Star Schema (one fact + dimension tables)
- 2. Date table created and marked as Date Table
- 3. All measures organized in a dedicated 'Measures' table
- 4. Bi-directional relationships justified or removed
- 5. Calculated columns moved to Measures wherever possible
- 6. RLS (Row-Level Security) configured if needed
- 7. Dashboard title + business owner name visible on first page
- 8. Last Refresh timestamp on every page (or in header)
- 9. All visuals have descriptive titles (not 'Sum of Amount')
- 10. Tooltips configured on key visuals for context
- 11. Conditional formatting on KPI cards (red/yellow/green logic)
- 12. Drill-through page configured for deep dives
- 13. Bookmarks for page navigation OR sync slicers across pages
- 14. Performance Analyzer run — load time under 10 seconds
- 15. Mobile layout configured (Phone view in Power BI Desktop)

Print this page. Tape it next to your monitor. Use it for every dashboard you ship.

■ What's Next?

I'm **Gaurav Kumar Vishvakarma** — a Freelance Data Analyst, Power BI Developer & AI Engineer based in Bengaluru, India, with 4+ years of enterprise BI experience across BFSI, market research, and consulting.

I'm currently **available for freelance Power BI projects, BI consulting, and full-time remote/hybrid roles** across India and Europe (Germany, Netherlands, UK, France).

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■ Need help building Power BI dashboards for your business?
DM me on LinkedIn for a free 15-min discovery call →

If this Quickstart Pack helped you, share it with a fellow data analyst — they'll thank you for it. ■

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