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DATA ANALYTICS & VISUALIZATION



Data and BI expert with over 15 years of experience in creating sustainable and intuitive insights. Leader in delivering high-quality solutions at all business levels.

Portfolio: [linkedin.com/in/njeremymoss/details/projects](https://www.linkedin.com/in/njeremymoss/details/projects)

Idaho National Laboratory, 2023–2025

Time Billing Suite (links to demo report)

Problems Solved:

- Managers had no comprehensive view of employee time card usage and Leave Hours balances.
- Employees tended to try to use all PL Dec and Jan to not lose personal leave (PL) at carryover limit date (if over limit).
- Data had to be sent from a data pull by HR to admins, who would manually edit the data in Excel, then send to all Managers in Excel, costing hundreds of hours each year.
- No security, too many risks for PII violations.

Solutions:

- Created app-like experience for all employees to quickly see current leave hours balances, and predict future balances.
- Created data model with dynamic matrixed hierarchical row level security (RLS). Employees can only see their data, and anybody that reports to them.
- Added ability to view all or just direct employees (limited functionality with this demo report).
- Multiple self learning and dynamic elements and guide page.

Skills:

- Microsoft Power BI
- Data Modeling
- SQL
- Information Security
- People Analytics

Critical Roles Tool

Problems Solved:




- No visibility to risks related to roles if the person in the role were to
- Difficult to align on criticality/urgency with no standard of
- Disconnect between HR and managers.

Solutions:

- Embedded a Power App inside a Power BI report, allowing managers to quickly and intuitively add/update direct reports data, and see analytics within the same user experience. No need to jump between tabs or systems.

Skills:

- Microsoft Power BI
- Microsoft Power Apps
- Microsoft Power Automate
- SharePoint
- Cross-functional Collaboration



Input RolesAnalysisGuide

Updated: 9/17/2024 9:42 AM

Step 1: Enter role data

Effective Date:
3/10/2025

Org / Division:
G520 - Experiment Engineering

Role / Position Title:
Type unique role title.

1=least, 5=most true

Impact
3

Skill
5

Gatekeeper
2

Internal Talent
1

External Talent
4

Urgency
3

Comments: 0 / 255
Optional context or reasons for ratings. 255 character limit.

Submit

Step 2: Click "Refresh visuals" button ("O" top right area of screen, see "Guide" page for screenshot of example)

Step 3: Select org / division and verify data is correct (red=high risk, yellow=moderate risk, blue=low risk)

Org / Division
G520 - Experiment Engineering

Role Title / Comments	Impact	Skill	Gate Keeper	Internal Talent	External Talent	Crit Rating	Urgency
⊞ Skill: Experiment Engineering Manager	5	4	4	3	4	20	2
⊞ Org: Experiment Engineering	3	4	1	3	4	15	2
⊞ Experiment Engineering	2	3	2	3	4	14	1
⊞ Experiment Engineering	3	4	2	4	5	18	2
⊞ Experiment Engineering Safety Analyst	4	5	3	3	5	20	4
⊞ Experiment Engineering (and) Engineering	3	4	2	3	4	16	2
⊞ Experiment Engineering	2	3	2	3	4	14	2
⊞ Skill: Engineering	4	4	2	3	5	18	2
⊞ Experiment Engineering	3	3	2	3	4	15	2

If incorrect data was submitted, please email GRP-APT@INL.GOV with details.
See "Guide" page for more details and tips how to use this report.

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Operations Training System

Problems Solved:

- Different training standards between facilities.
- No way to holistically manage or evaluate training of operations employees, especially new hires.
- No knowledge transfer from retiring employees to new hires.
- No redundancy in ability to run manufacturing lines, expertise often guarded or known by a single operator.
- LMS purchase would cost hundreds of thousands of dollars and take years to implement.

Solutions:

- Created data input solution for facility training coordinators (combination of Excel, VBA, and SharePoint).
- Developed Power BI report to comprehensively view same metrics between facilities.
- Worked cross-functionally to have agreement with all stakeholders about metrics to be used and data input criteria.

Allowed multiple customers beyond original scope to make informed strategic decisions based on current training levels at each facility.

Skills:

- Microsoft Power BI
- Microsoft Excel
- People Analytics
- SharePoint
- Cross-functional Collaboration



Product Shelf-Life Analysis

Problems Solved:

- Finished Goods were expiring before being shipped to customers.
- Orders were being placed for finished goods that didn't exist or couldn't be produced in time to meet customer requirements, causing loss of business or discounts.
- Existing channels to understand customer demand and coordinate demand for raw materials was too slow.

Solutions:

- Created metrics and sourced data from ERP to show current inventory levels vs customer demand.
- Created metrics and sourced data to predict what orders could be met based on lead times data and current inventory levels.
- Provided cost/value data to track actual and potential/predictive losses over time.
- Used enterprise-wide as a strategic report and reviewed daily by all leaders: Customer Service, Sales, Operations, Logistics, and Procurement.

Skills:

- Microsoft Power BI
- SQL
- Predictive Analytics
- Data Visualization
- Cross-functional Collaboration

Export Subscribe Comments Share to Teams Unfavorite

Part: All Buckets = "Can't Deliver", "1-15 days", "16-30 days" REFRESH DATE (MT) 6/11/2020 7:17:49 PM

Table 1: Inventory Shelf Life Analysis					Table 2: Next Customer Orders for Part		
Part	On Hand Qty	Value	Ship By	Max Remain Days	Planned Ship Date	Order	Qty
- Potato Granules - No Sulfite, G	10	\$ 212	Can't Deliver	480	06/12/2020		240
- Potato Granules - No Sulfite, G	797	\$ 16,988	16 to 30 days	480	06/12/2020		120
- Hungry Jack® 100% Real Idaho	74	\$ 490	Can't Deliver	330	06/12/2020		300
- Grandy's Old Fashioned Potat	90	\$ 51	Can't Deliver	\$ 929	06/12/2020		60
							17,364

Click on line populates data on tables 2, 3, and portion of 4 for part number

Table 3: Remain Days at CO Deliv for Part		Table 4: Inventory Part in Stock						
Remain Days	Ship By	Days Left	Inv Site	Location	Lot	On Hand Qty	Value	Exp Date
330	02/25/2020	-107		FLOOR		1	\$	08/23/2020
285	08/31/2020	81		FLOOR		1	\$	02/27/2021
270	09/06/2020	87		FLOOR		7	\$	03/05/2021
219	09/14/2020	95		FLOOR		48	\$	03/13/2021
180	10/12/2020	123		FLOOR		1	\$	04/10/2021
90	10/17/2020	128		FLOOR		15	\$	04/15/2021
				FLOOR		1	\$	04/15/2021
	12/25/2020	197		FLOOR		3	\$	06/23/2021
	12/28/2020	200		FLOOR		60	\$	06/26/2021
				FLOOR		1	\$	06/26/2021
	12/29/2020	201		FLOOR		60	\$	06/27/2021
	01/08/2021	211		FLOOR		3	\$	07/07/2021
				FLOOR		2	\$	07/07/2021
	01/09/2021	212		149-C042		540	\$	07/08/2021
	01/10/2021	213		FLOOR		600	\$	07/09/2021
	01/16/2021	219		149-C036		420	\$	07/15/2021
				240-PB034		840	\$	07/15/2021
						38,975	\$	

Click on table 3 value to populate portion of table 4

cross report drill-through: - Inventory Shortage Report - Customer Order Shelf Life

cross report drill-through: - Item Aging Analysis

Days to Ship = ship by date - today
Ship By = exp date - remain days at co deliv for part

Week 4: How Much Life on Earth Weighs (links to report)

I participated in the 2025 Power BI World Championships each week. My week 4 submission was chosen as a **Judge's Favorite** and **Storytelling Standout**.

We had a week (whatever free time outside of day job) to complete each dashboard, which for me amounted to less than ~8 hours each week).

Microsoft's focus with this competition is leveraging Power BI core visuals functionality, data visualization best practices, UI/UX, and accessibility (color contrast, readability, alt text, etc.).

Skills:

- Microsoft Power BI
- HTML
- UI/UX
- Data Visualization
- Data Analytics

Judges favorites

Mine!

This week's entries were incredible for many reasons! We had probably our best display of storytelling with data, outshining weeks 1-3. We also saw creativity through the roof! Here are our favorites, in no particular order.

- [Week 4 - THE BUZZ WORTHY WORLD OF BEES](#) - 📖 Storytelling Standout
- [Week 4 - Spring Tides, the Force of the Ocean](#)
- [Week 4 | How Much Life on Earth Weighs](#) - 📖 Storytelling Standout
- [Week 4 - Weathering the Storm: America's Storm Events Unveiled](#)
- [Week 4 - MyReality - Visualise your carbon footprint](#)

Metro Police of D.C. Executive Summary (links to report)

This was my submission to the 2025 March Data DNA Challenge, by Onyx Data and ZoomCharts who provided the dataset. It won **The Storyteller** award badge!

I approached this as if I was doing data analysis for the MPDC and making recommendations. I wanted to stretch myself with leveraging Power BI's shape maps visual to do analysis. Particularly examining correlations and overlaying map visual layers.

In this case I overlaid police district and service areas with neighborhood boundaries and found some interesting insights. In particular I found that neighborhoods split between multiple police districts or service areas saw significantly more crime!

Skills:

- Microsoft Power BI
- Data Modeling
- UI/UX
- Data Visualization
- KPI Development





Executive Summary - Performance

Reporting period: Jan 2025 - Feb 2025

Performance

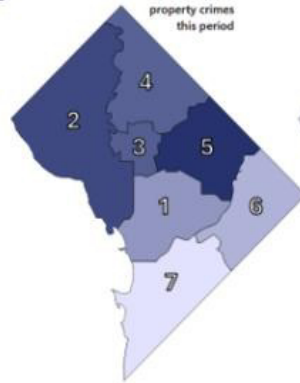
Shift Trends

Neighborhoods

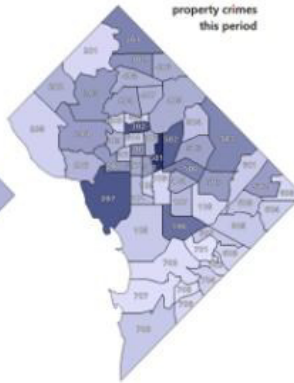
Data

Author

Police District 5 had the most property crimes this period

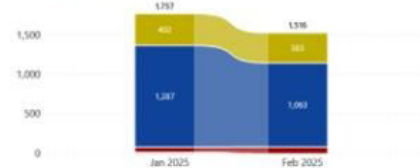


Police Service Area 501 had the most property crimes this period



District	Total Cases	Open Cases	Avg Days to Close
1	▼ -22%	▼ -4.9%	▼ -0.58
2	▼ -6%	▼ -0.3%	▼ -0.06
3	▼ -17%	▲ 0.3%	▼ -0.28
4	▼ -25%	▼ -3.6%	▼ -0.45
5	▼ -10%	▲ 0.6%	▲ 0.07
6	▲ 1%	▲ 3.8%	▼ -0.49
7	▼ -12%	▼ -1.9%	▼ -0.24
Total	▼ -14%	▼ -0.9%	▼ -0.25

Arson Burglary Theft Vehicle Theft



Policing with Purpose. Serving with Care.

* This report is for demonstration purposes only and has no affiliation with the MPDC.



Executive Summary - Shift Trends

Reporting period: Jan 2025 - Feb 2025

Performance

Shift Trends

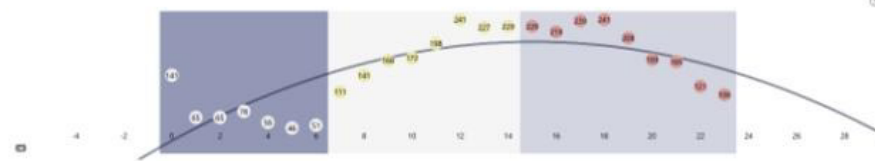
Neighborhoods

Data

Author

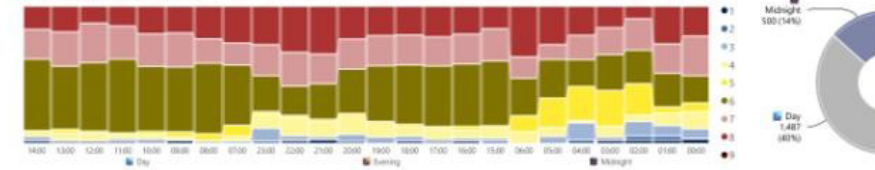
Cases by Police Shift and Hour

Most crimes currently take place between Day and Evening shifts. Recommendation: Consider floating shift or adjust shift start and end times.



Cases by UCR rank

Pro Tip: Hover mouse over data to drill up or down



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Executive Summary - Neighborhoods

Reporting period: Jan 2025 - Feb 2025

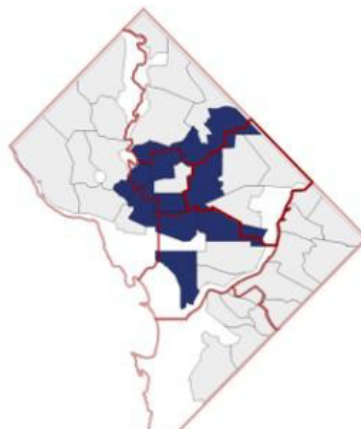
Performance

Shift Trends

Neighborhoods

Data

Author



Neighborhoods that share multiple police districts	
No	Yes
Neighborhoods	35 9
Cases	2,286 1,398
Cases per Neighborhood	65.3 155.3
Likelihood of Crime	78% 186%

Neighborhoods that share multiple PSAs	
No	Yes
Neighborhoods	14 30
Cases	437 3,247
Cases per Neighborhood	31.2 108.2
Likelihood of Crime	37% 129%

Neighborhood	Cases	PSAs	Districts
1	66	2	2
2	280	5	2
6	140	4	2
7	117	4	2
8	219	6	3
9	74	3	2
20	52	4	2
21	214	6	3
25	236	6	2
Total	1,398	24	5

Recommendation: Commission a taskforce to evaluate aligning PSAs within neighborhood clusters. It is possible that having multiple police districts and PSAs in the same neighborhood lead to less effective policing activities and higher crime.

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