

Introducing the Power BI Platform



Schedule

- Wednesday
 - 10 AM - Lecture 1
 - 12:10 PM - Lecture 2
 - 2 PM - Lecture 3
 - 4 PM - Lecture 4
- Thursday
 - 10 AM - Lecture 5
 - 12 PM - Lecture 6
 - 2 PM - Lecture 7
 - 4 PM - Lecture 8



Student Background

- What is your name?
- What are you doing with Power BI?
- Which products have you used
 - Access
 - Excel
 - SQL Server, SSRS, SSAS
 - Tableau
 - Others



Agenda

- Understanding the Power BI Platform
- Creating a Trial Office 365 Tenant for Testing
- Creating Datasets, Reports and Dashboards
- Understanding Power BI Licensing
- Staying in Sync with Monthly Updates



What is Business Intelligence?

- BI focuses on business health and performance
 - Gather insights into health of business processes
 - Take corrective actions in a timely fashion
- BI projects typically involve the following...
 - Integrate data from multiple sources
 - Perform data transformation and complex calculations
 - Analyze large data sets with rapid query response
 - Create insightful reports and visualizations
 - Provide insights that are “actionable”



How is the BI Software Industry Changing?

- Software industry is experiencing new proliferation of data
 - Number of telemetry devices is increasing exponentially
 - Device-generated data is providing new business opportunities
 - Example: Uber has used geolocation data to disrupt taxi industry
- Traditional BI and analytics models are being disrupted
 - New analytics capabilities available with new types of data sources
 - Data discovery and unstructured data analytics are new frontiers
 - Demand for self-service BI tools are on the rise
 - Balance of power shifting from IT to business divisions



What is Power BI?

- What is Power BI?
 - Cloud-based subscription service
 - Environment which promotes self-service BI *to the end user*
 - BI Platform to assists with data import, analysis and visualization
- Power BI benefits from being a cloud-based service
 - It takes only 5 seconds to subscribe to the Power BI service
 - New users can create something significant in 5 minutes or less
- Power BI adoption numbers *(as of Q1 2016)*
 - 5 million subscribers
 - 200,000 organizations
 - 40 different languages



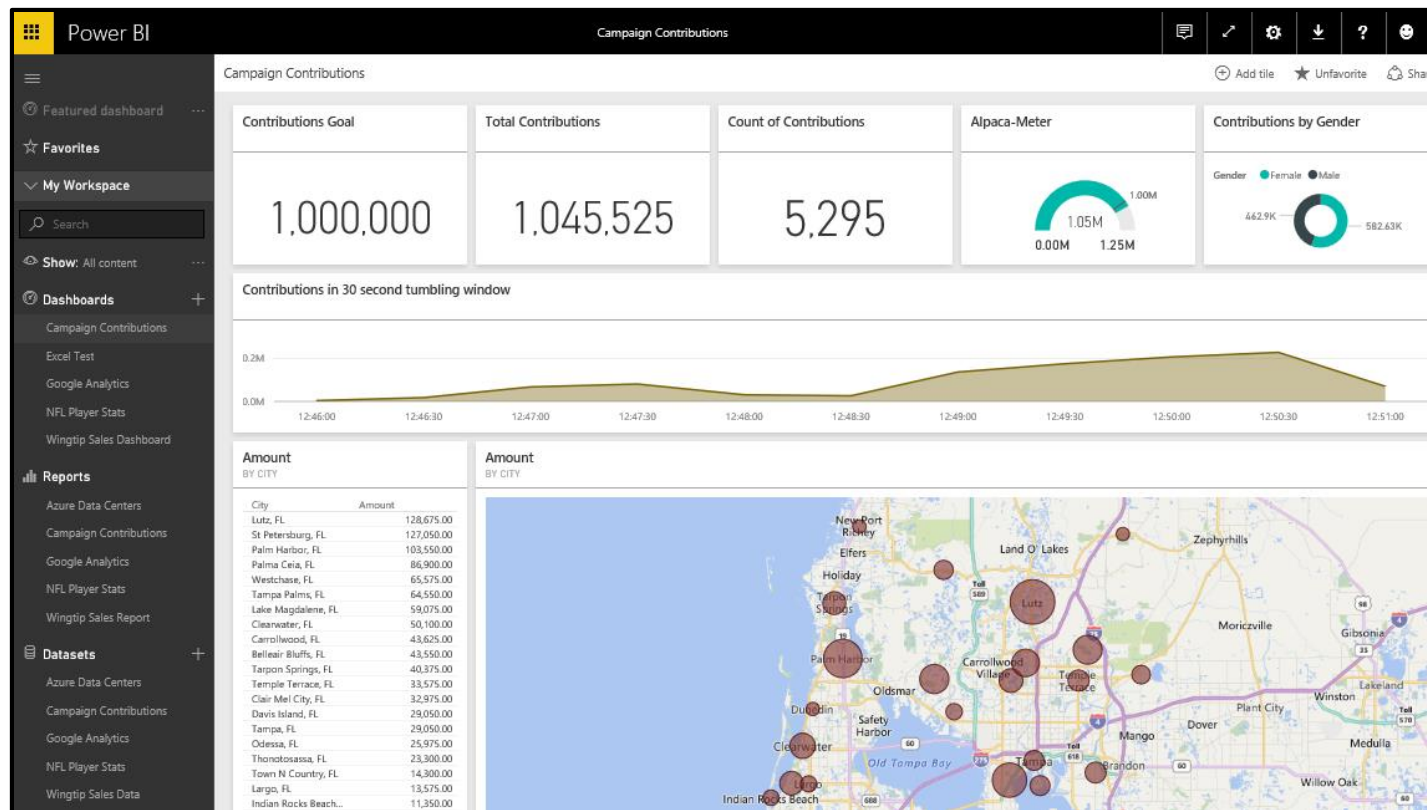
Power BI Benefits from Microsoft Azure

- Power BI is built on top of Microsoft Azure
 - Power BI solutions can be scaled as required
 - Power BI solutions have global reach



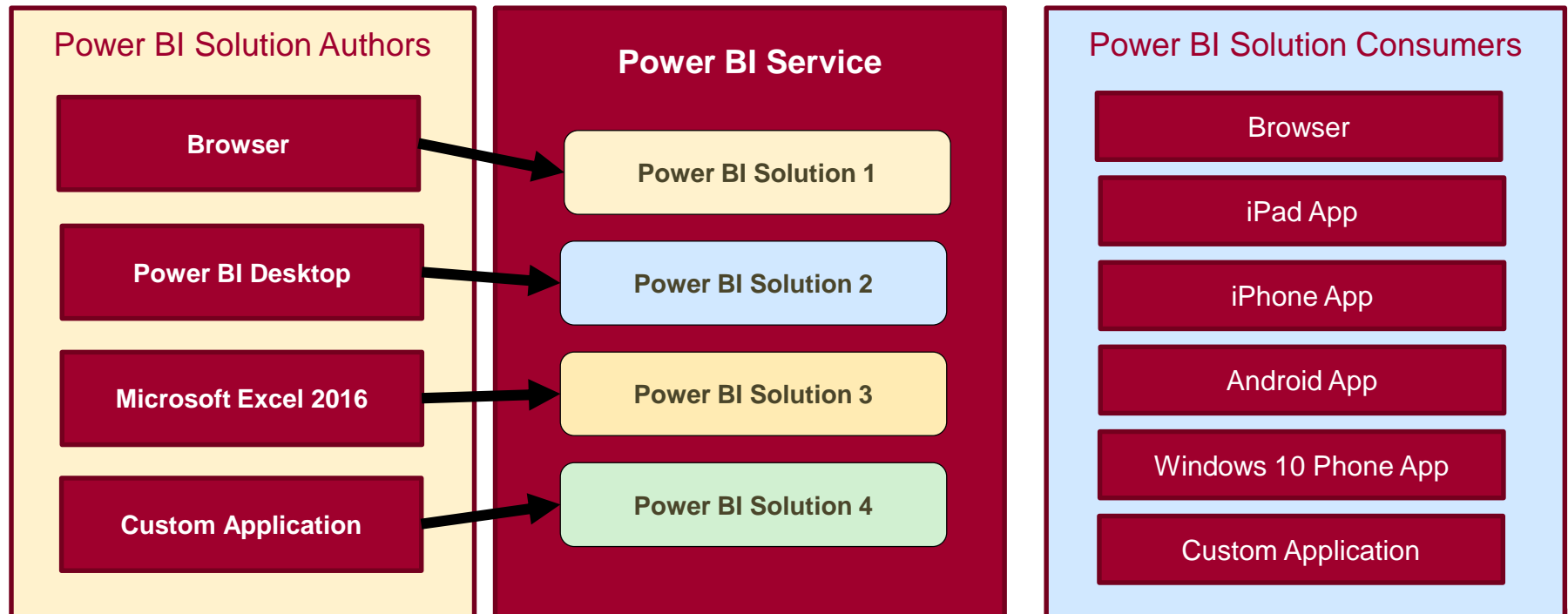
The Power BI Service

- The Power BI Service
 - Provides cloud-based foundation for Power BI platform
 - Accessible through browser at <https://app.powerbi.com>

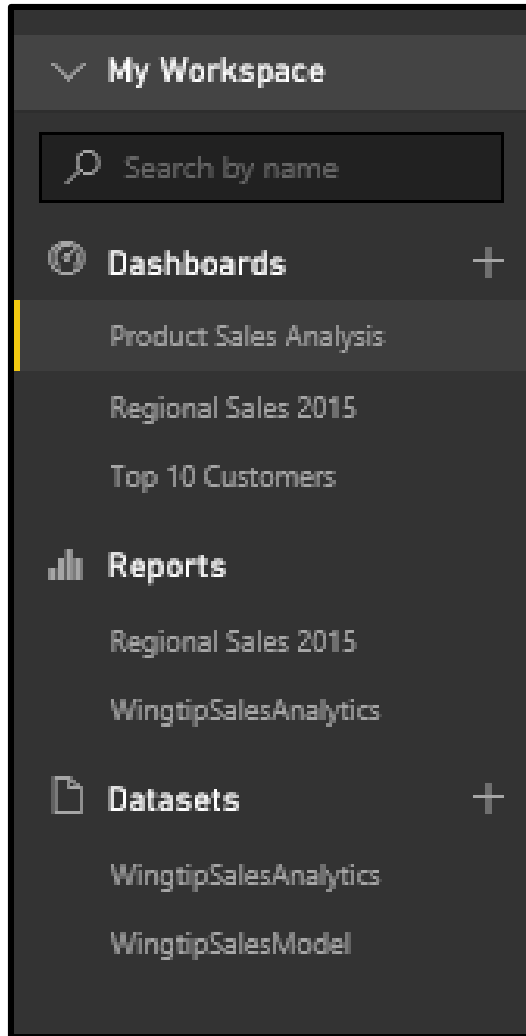


Power BI Service Architecture

- Power BI support for authors and consumers
 - BI solution authors have a choice in authoring tools
 - BI solutions consumers can use wide range of devices



Central Power BI Concepts



- **Workspace**
 - Provides user context and asset container
 - Every user has personal workspace
 - Team development requires group workspaces
- **Dashboard**
 - Consolidated view into reports and datasets
 - Custom solution entry point for mobile users
- **Report**
 - Collection of pages with tables & visualizations
 - Provides interactive control of filtering
- **Dataset**
 - Data model containing one or more tables
 - Can be very simple or very complex



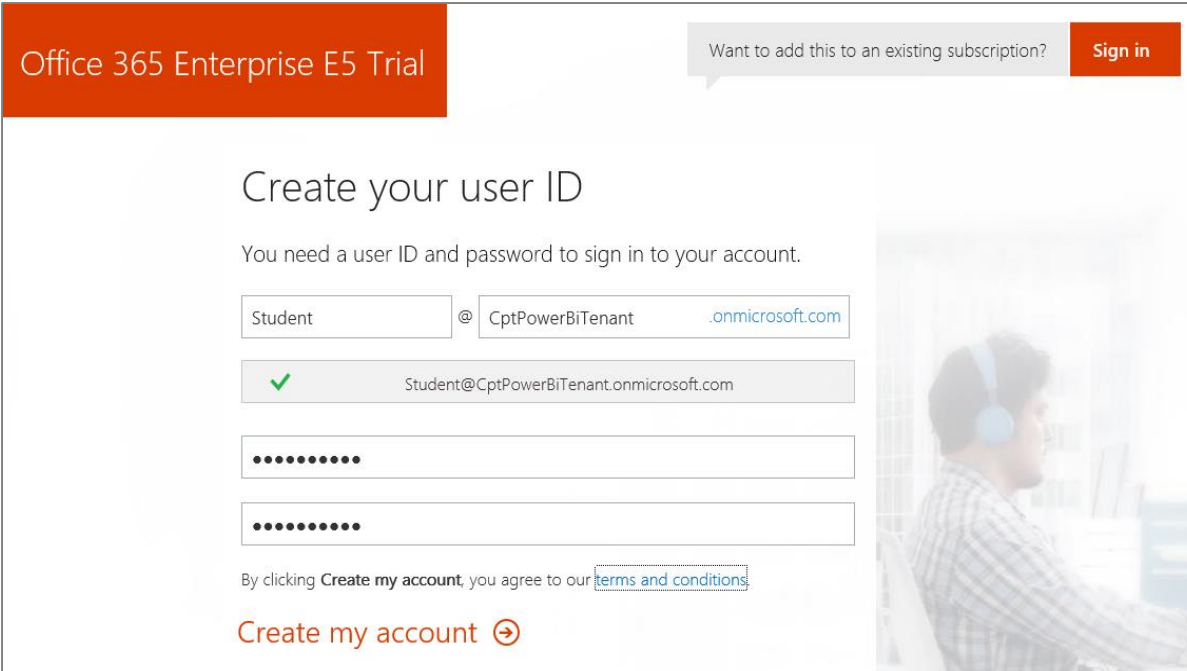
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Creating a Power BI Testing Environment

- Sign up for an Office 365 Enterprise E5 trial account
 - Creates a new Office 365 tenant
 - Creates an account which is tenant administrator
 - You can create 25 user accounts for testing purposes
 - You can create and test Office 365 unified groups



The screenshot shows the 'Office 365 Enterprise E5 Trial' sign-up page. At the top left, there is an orange banner with the text 'Office 365 Enterprise E5 Trial'. To the right of this banner, there is a grey box with the text 'Want to add this to an existing subscription?' and an orange 'Sign in' button. The main heading is 'Create your user ID'. Below this, it says 'You need a user ID and password to sign in to your account.' The form consists of several fields: a 'Student' field, an '@' symbol, a 'CptPowerBiTenant' field, and a '.onmicrosoft.com' field. Below these fields, there is a green checkmark icon and the text 'Student@CptPowerBiTenant.onmicrosoft.com'. There are two password fields, each with a series of dots for masking. At the bottom, there is a link to 'terms and conditions' and a 'Create my account' button with a right-pointing arrow.

Office 365 Enterprise E5 Trial

Want to add this to an existing subscription? [Sign in](#)

Create your user ID

You need a user ID and password to sign in to your account.

Student @ CptPowerBiTenant .onmicrosoft.com

✓ Student@CptPowerBiTenant.onmicrosoft.com

.....

.....

By clicking **Create my account**, you agree to our [terms and conditions](#)

Create my account ➔



Office 365 admin center

- Chores to accomplish in Office 365 admin center
 - Learn how to add secondary user accounts for testing
 - Learn how to view and manage groups

Office 365 | Admin center preview

Home > Active users

Power BI Bootcamp Labs

[+ Add a user](#) [More](#) Filters All users [Export](#)

<input type="checkbox"/>	Display name ^	User name	Status
<input type="checkbox"/>	James Bond	JamesB@PowerBiBootcamp.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Ted Pattison	Student@PowerBiBootcamp.onmicrosoft.com	Office 365 Enterprise E5

[+ User](#) [Types of users](#) [Filters](#)

Users are people in your organization who can access Office 365.

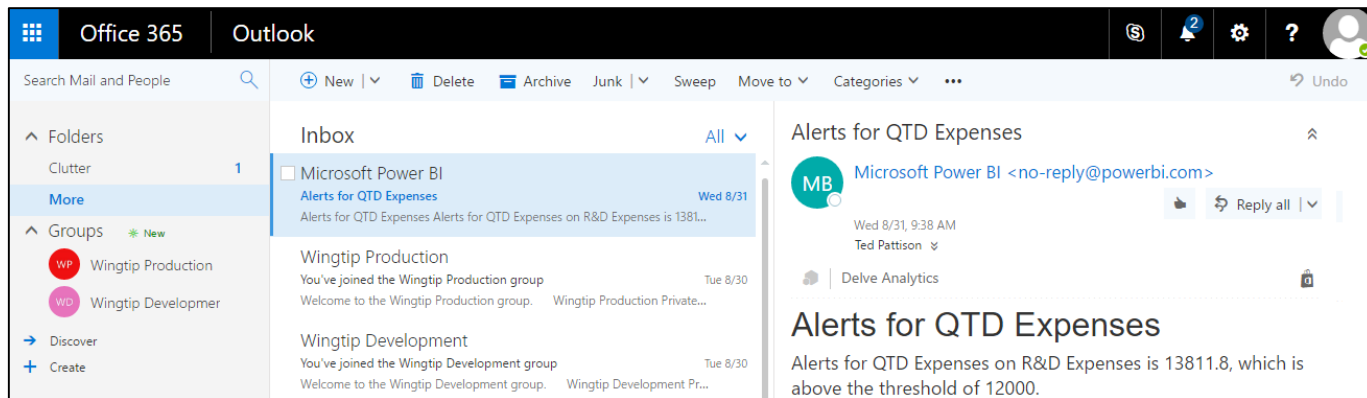
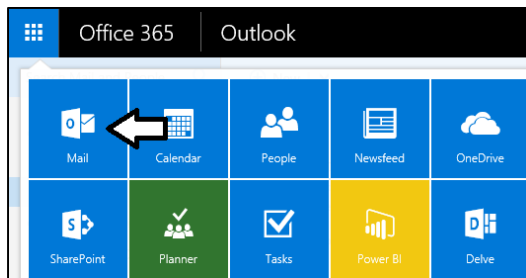
Different types of users and accounts can use Office 365 in distinct ways.

Learn how filtering will help you keep this list under control – before it gets too long.



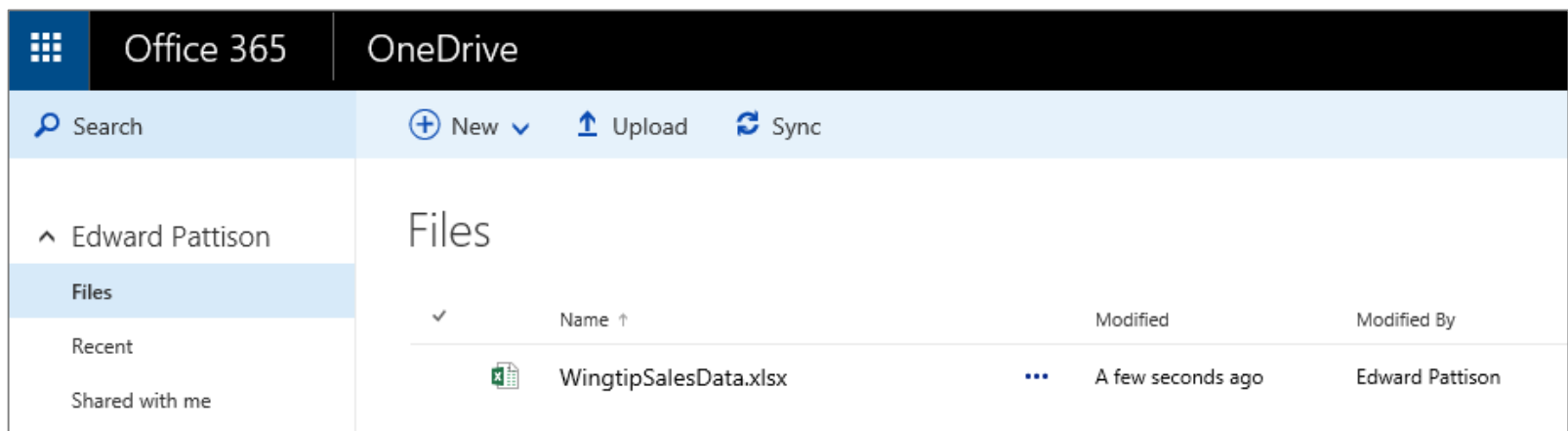
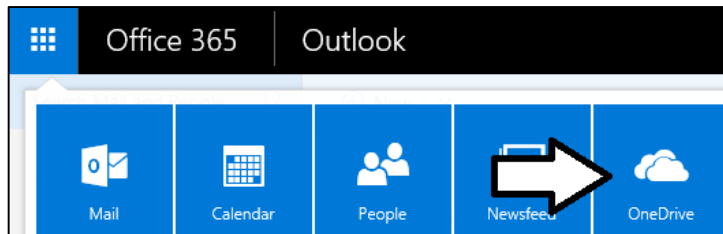
Accessing Your Office 365 Mailbox

- Make sure you can access your Exchange Inbox
 - Accessible in browser using Outlook Web App (OWA)
 - View messages sent by Power BI service
 - View and interact with Office 365 groups



Uploading Data Files to OneDrive for Business

- Preferred location for data files consumed by Power BI service
 - Excel workbooks
 - CSV files
 - PBIX files created using Power BI Desktop





DEMO

Managing Users and Subscriptions in the Office 365 admin center

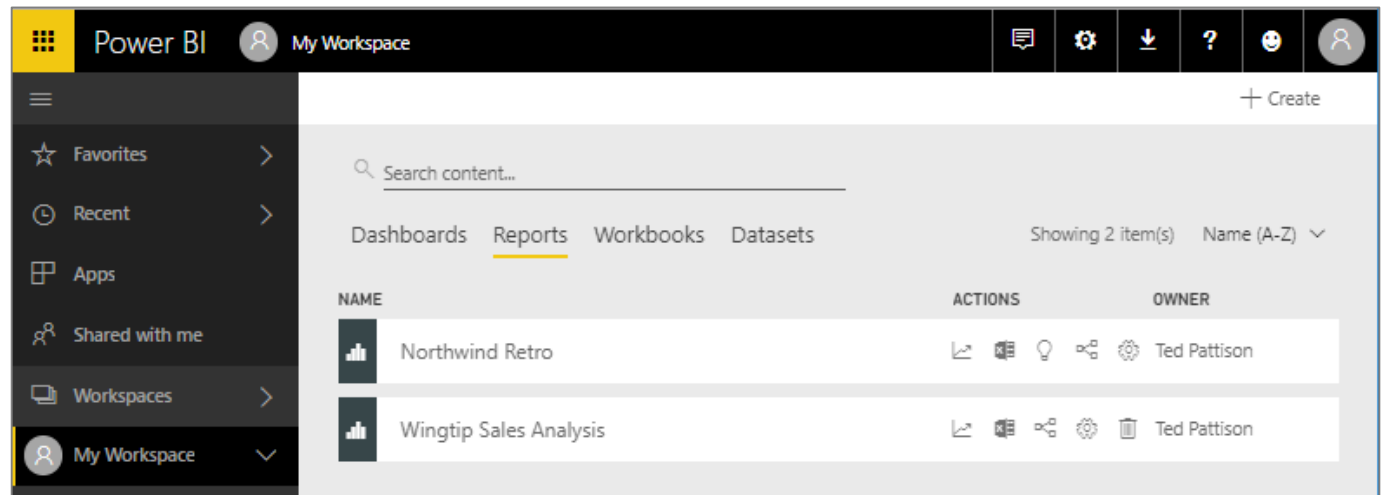
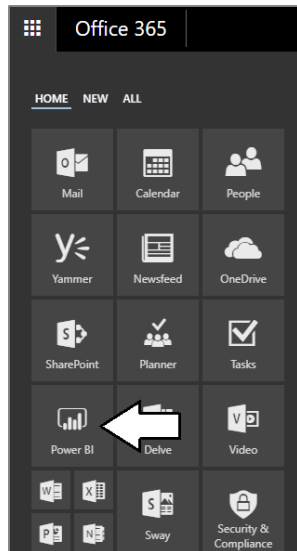
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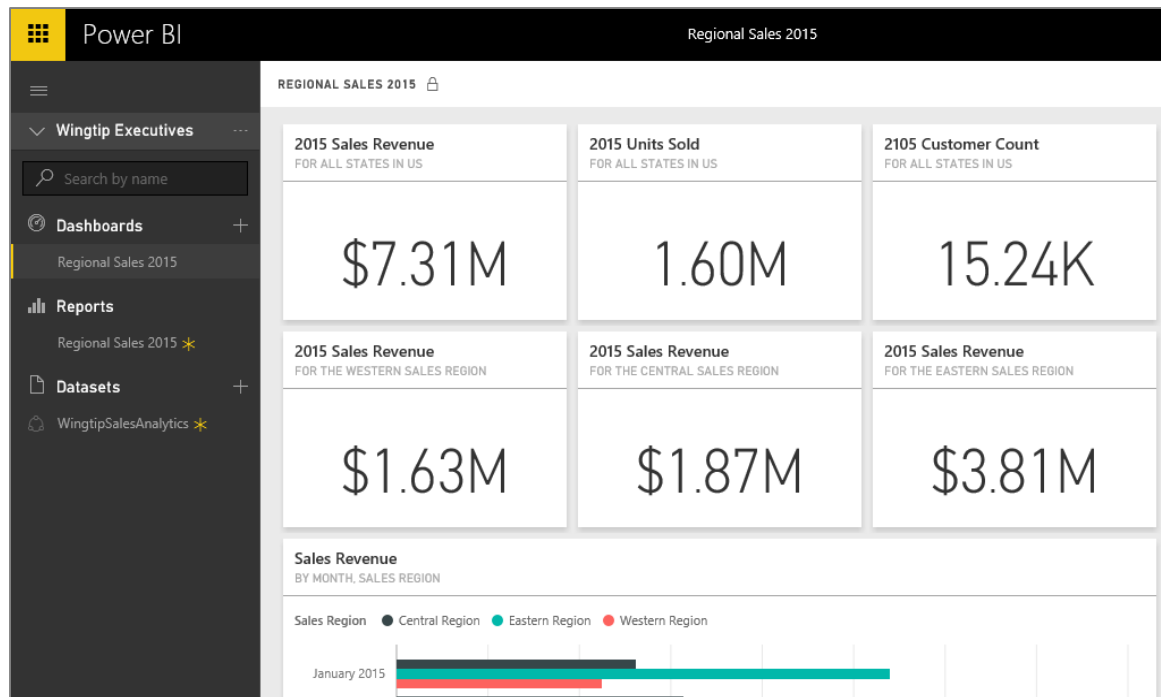
Navigating to the Power BI Service

- Power BI service is accessible through browser
 - Logged in user runs in context of a specific workspace
 - Provides user with access to dashboards, reports and datasets



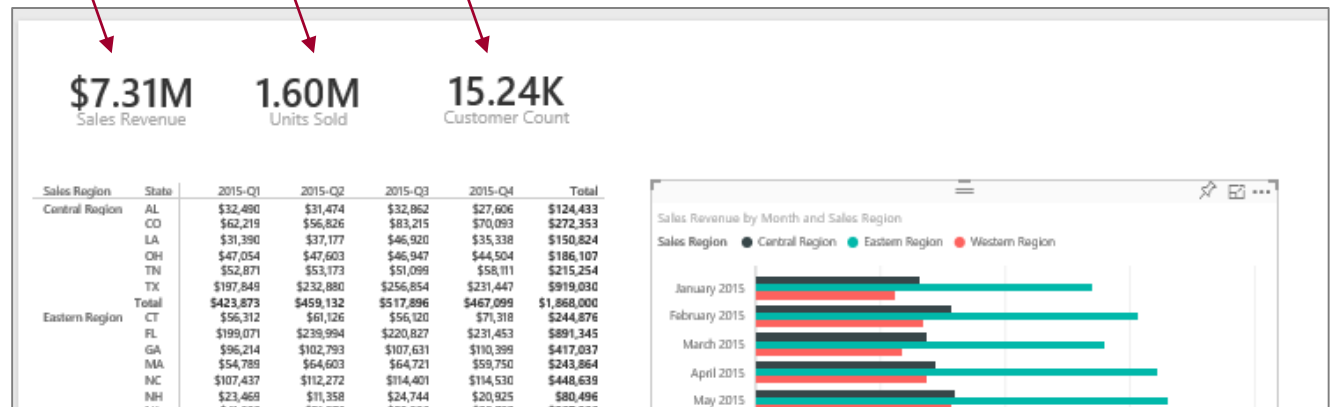
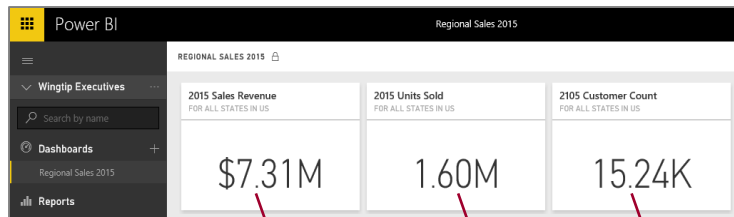
Dashboards and Tiles

- Dashboard is a collection of tiles
 - Tile can be created by pinning visual from a report
 - Tile can be created by pinning query result from dataset



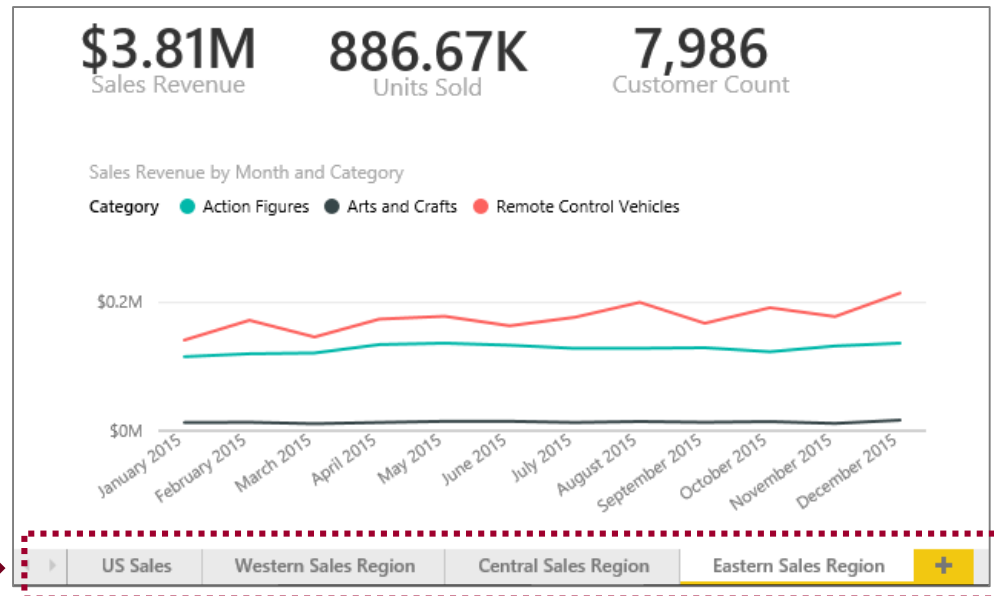
Dashboards and Reports

- Dashboards link users to reports
 - Dashboard tiles designed to provide high-level view
 - Clicking tiles drills down into report to see more detail



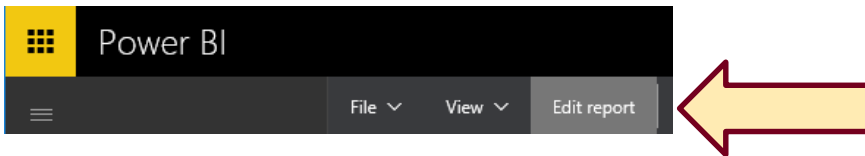
Reports and Pages

- Reports contain one or more pages
 - A report can be designed with a single page
 - A report can be designed with many pages
 - Tabbed navigation located at bottom of report view
 - Each report is associated with exactly one dataset

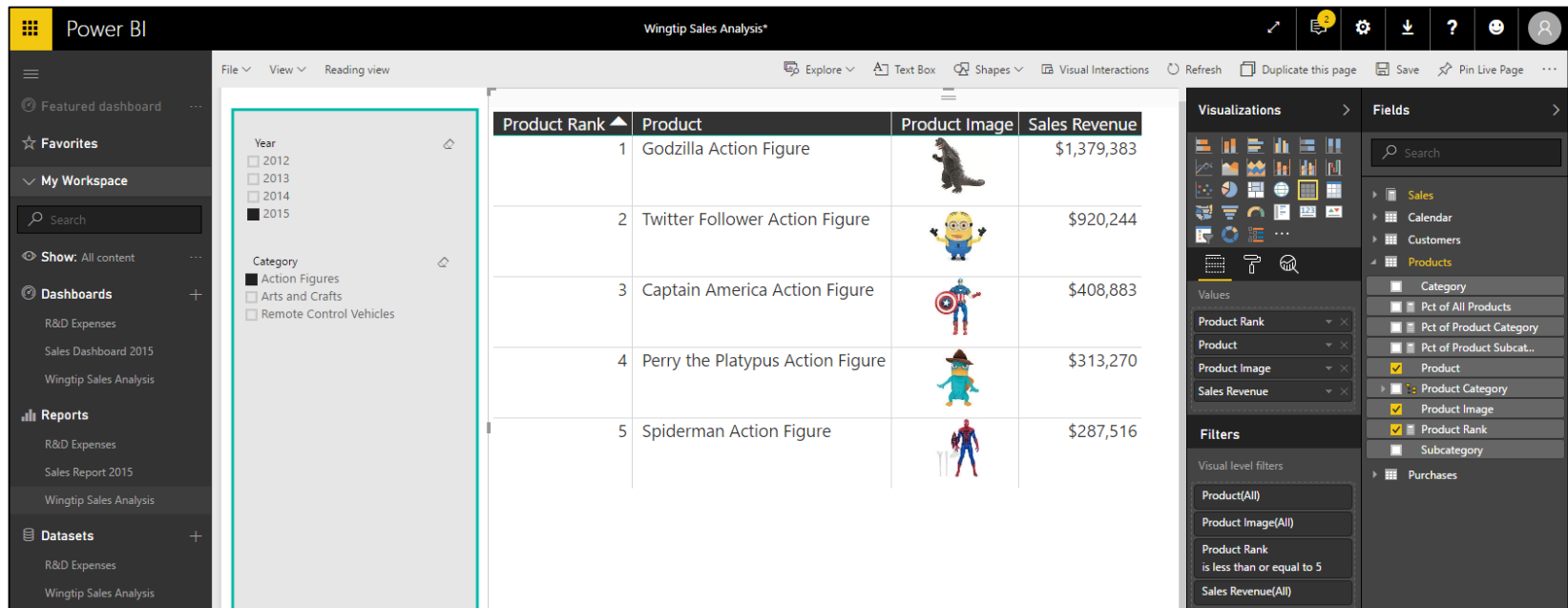







Report Authoring

- Report initially opens in reading view
 - Click Edit report to switch to edit mode



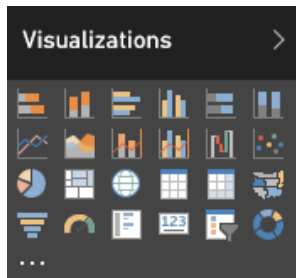
- Report design tools appear on right side of page

A screenshot of the Power BI report authoring interface. The report is titled 'Wingtip Sales Analysis' and is in 'Reading view'. The main content area displays a table with 5 rows of product data. On the right side, there are two panels: 'Visualizations' and 'Fields'. The 'Visualizations' panel shows various chart and table icons, with the 'Table' icon selected. The 'Fields' panel shows a list of fields, including 'Category', 'Product', 'Product Rank', and 'Sales Revenue', with checkboxes for each. The 'Filters' panel at the bottom right shows filters for 'Product Rank' and 'Sales Revenue'.

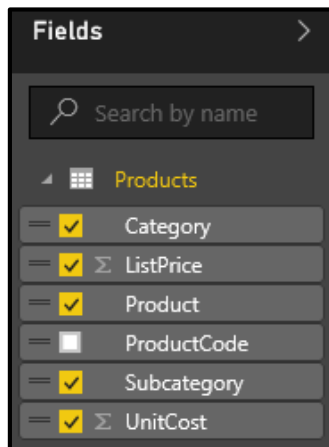
Product Rank	Product	Product Image	Sales Revenue
1	Godzilla Action Figure		\$1,379,383
2	Twitter Follower Action Figure		\$920,244
3	Captain America Action Figure		\$408,883
4	Perry the Platypus Action Figure		\$313,270
5	Spiderman Action Figure		\$287,516

Visuals (aka Visualizations)

- Reports are designed using visual (aka visualizations)
 - Each visual is based on an underlying visualization type
 - Visualization type can be changed using **Visualizations** pane

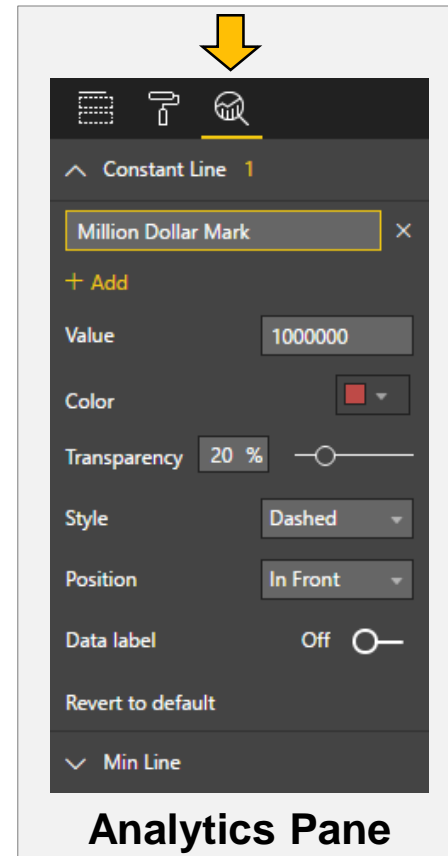
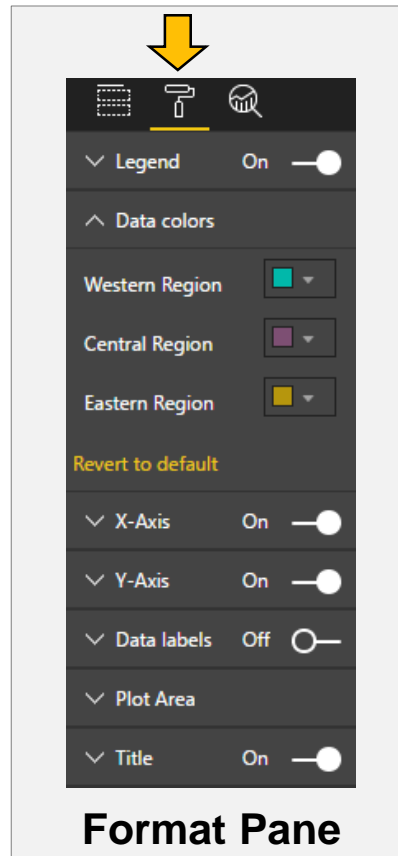
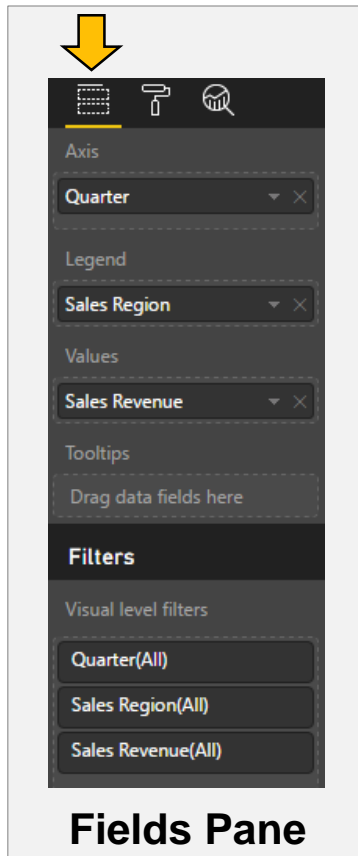


- Visuals creating by using fields from tables inside **Fields** list



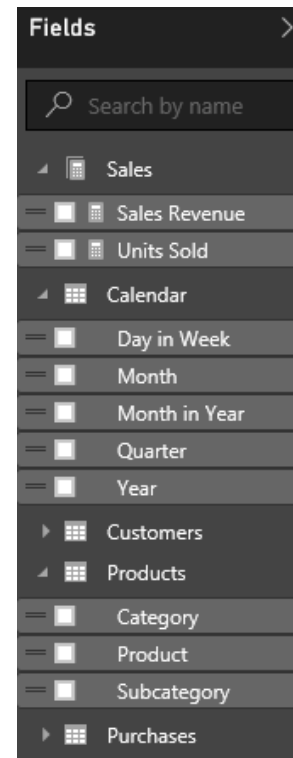
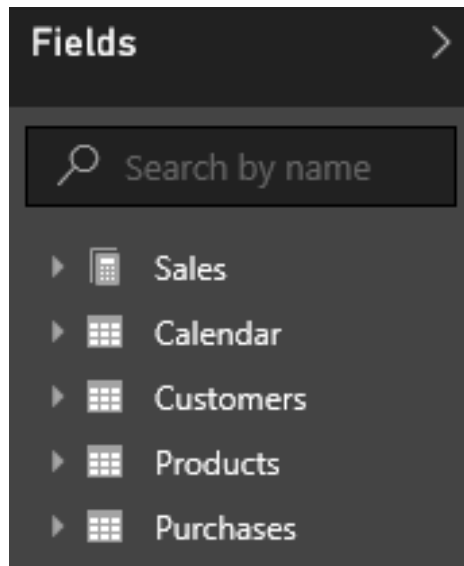
Editing Visual Properties

- Visual properties modified using three property panes
 - Visual properties vary greatly depending on type of visualization



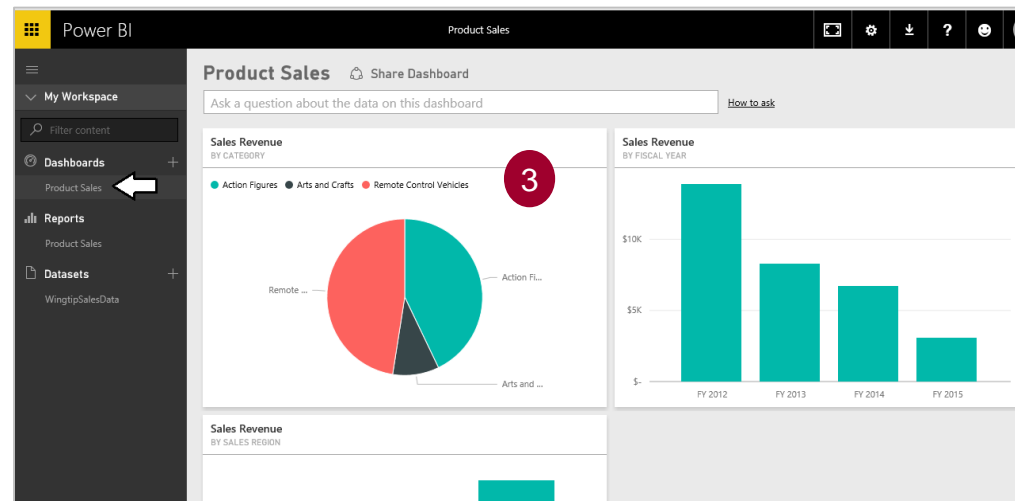
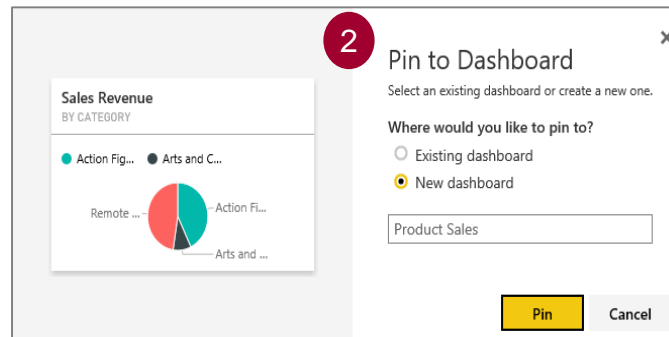
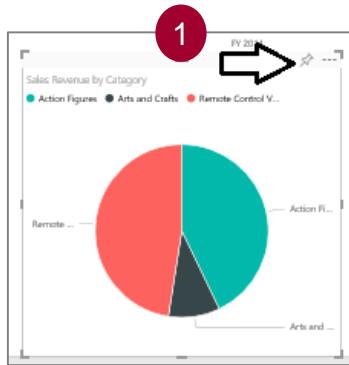
Report and Datasets

- Each report is based on an underlying dataset
 - **Fields** list in report designer shows tables and fields
 - Report author sees tables & fields as dataset consumer



Creating Dashboards

- Dashboards contain tiles
- Tiles created from visuals on report pages





DEMO

Getting started with Datasets, Reports and Dashboards

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Power BI Licensing

- Microsoft initially offered two Power BI licensing options
 - Power BI Free license
 - Power BI Pro license (\$10/month)
 - Everything has been running within a shared capacity
- Microsoft recently introduced Power BI Premium licensing
 - Power BI Premium customers can create dedicated capacities
 - Power BI Premium licensing has monthly fee for dedicated capacity
 - Dedicated capacity remove limits on upload size and # of refreshes
 - Dedicated capacity can serve Power BI content to non-licensed users
- More info at <https://powerbi.microsoft.com/en-us/pricing/>
 - Please ask questions about licensing offline and not during lectures



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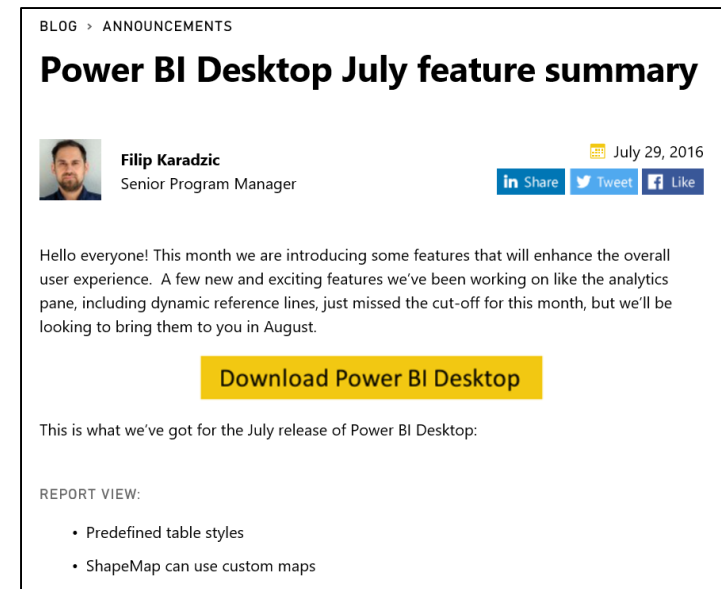
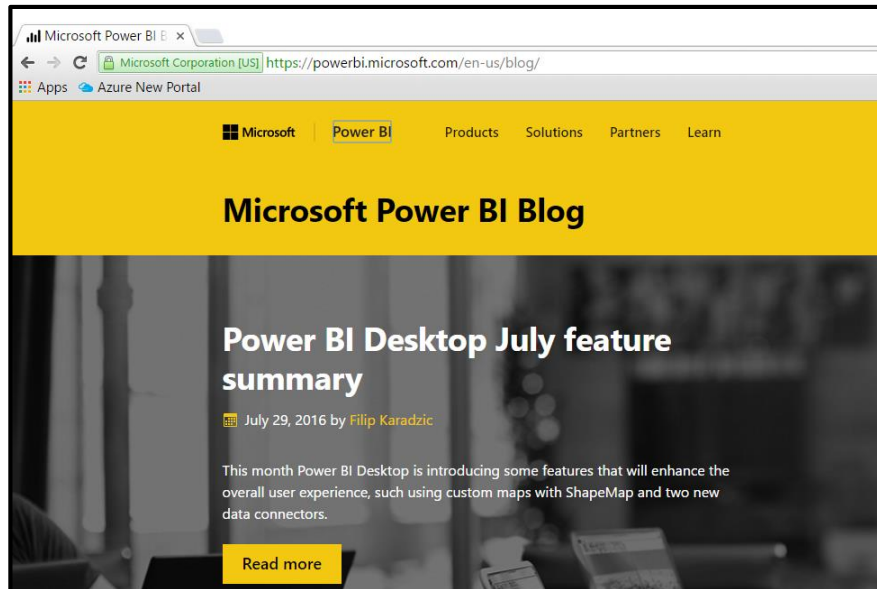


Power BI Team Blog

- Power BI Team Blog is an Essential Resource

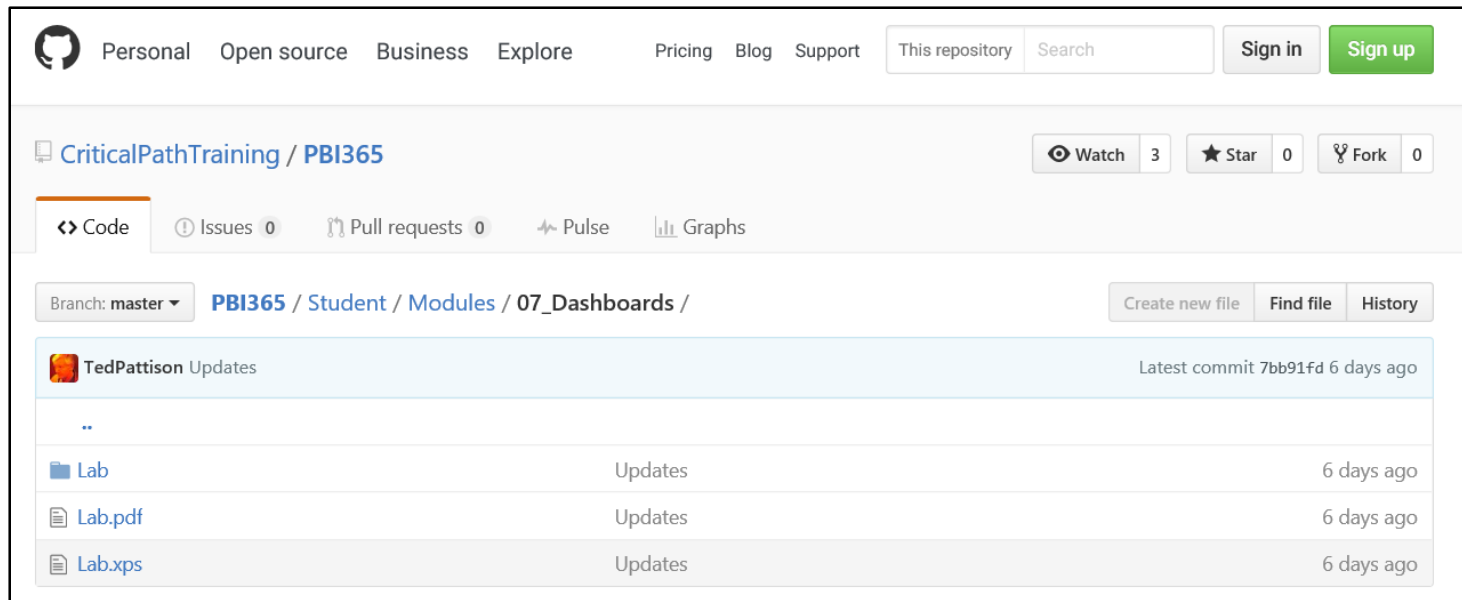
<https://powerbi.microsoft.com/en-us/blog/>

- Be on the lookout for monthly updates



Live Labs for DDPBI

- Student files for this course maintained in GitHub
 - Students files updated on a monthly basis
 - Lab write-ups available in PDF and XPS formats
 - Go to <https://github.com/CriticalPathTraining/DDPBI>



Summary

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