

# Understanding Job Posting Analytics Reports from Burning Glass

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# Today's main concepts

- ▶ Job postings versus traditional labor market data
  - ▶ Data considerations for Burning Glass Reports
  - ▶ Review of BG reports distributed to colleges
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# Job posting versus traditional labor market data



# Job Postings (Burning Glass)

- Metric for measuring job advertisements
  - Data is “scraped” from job postings and analyzed
  - Best used as an indicator of intention to hire or of the skills sought by employers
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# Strengths of Job Postings

- ▶ Very time-sensitive
- ▶ Who's hiring and what positions are they looking for?
- ▶ What skills are being requested?
- ▶ How much effort is going into attracting talent



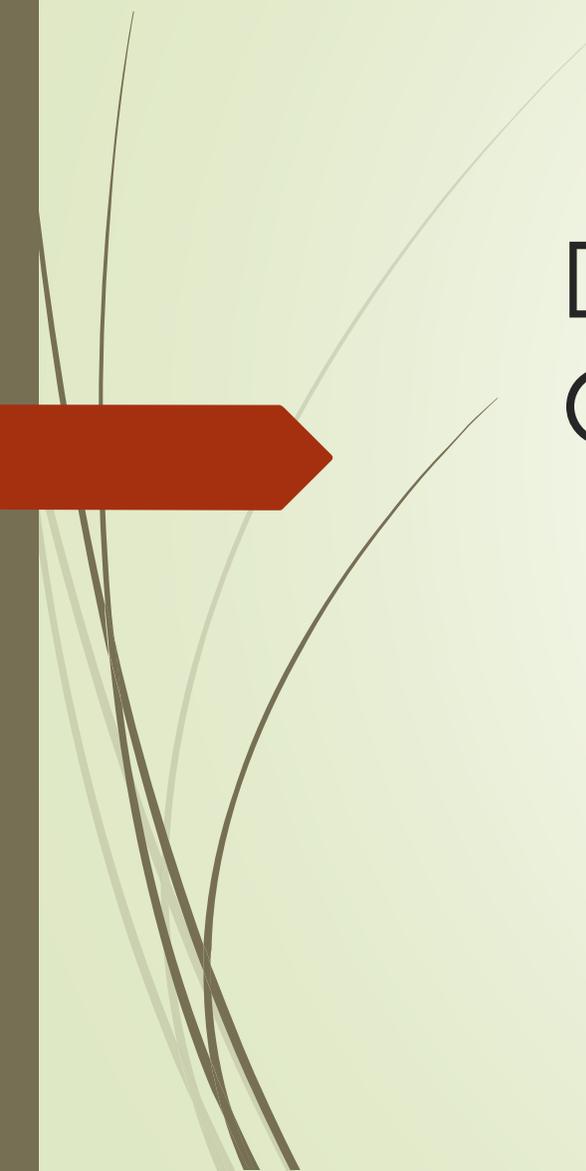
# Weaknesses of Job Postings

- ▶ Only a sample of the potential workforce
  - ▶ Certain jobs and regions will be over or under represented by postings
  - ▶ May see more postings than actual hires, and you may see more hires than actual postings
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# Structural labor market information (LMI)

- ▶ Standardized data on people who are currently employed in specific industries and occupations
- ▶ Strengths: structure, total coverage of economy (except self employed), good for calculating trends
- ▶ Weaknesses: lack of detail, no skills data, hard to connect actual employers, not real time sensitive



# Data considerations of Burning Glass reports



# Region and Age of Postings

- The reports match up to the counties (both in and out of Ohio) selected by each college.
  - The location represents the location of the posting and may not represent the location of the job vacancy. It is not uncommon for companies to post a job in other markets to attract talent.
  - The reports only include NEW postings over the time period.
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**Burning Glass  
Occupation  
Family**

**Burning Glass Occupations  
(BGTOccs)**

Occupation Families are the broadest categorization of occupations in the Burning Glass Occupation's taxonomy. Each Burning Glass Occupations is assigned to one of 24 occupation families.

Burning Glass Occupations (BGTOCCs) are derived from the Bureau of Labor Statistics SOC and O\*NET codes. Based on analysis of real-time job titles and requirements for skills and education, the BLS occupations were adapted to more accurately reflect current employer demand—separating out distinct occupations that BLS codes as one occupation in some cases and consolidating similar occupations that BLS splits out.

<b>BGTOCC Family</b>	<b>Job Postings</b>
<b>Health Care including Nursing</b>	<b>18,217</b>

<b>BGTOCC</b>	<b>Job Posting</b>	<b>BGTOCC</b>	<b>Job Posting</b>
Registered Nurse	8,940	Clinical Case Manager	772
Intensive / Critical Care Nurse	1,817	Health Technician / Technologist (Other)	734
Respiratory Therapist	959	Nursing Manager / Supervisor	623
Laboratory Technician	863	Personal Trainer / Fitness Instructor	332
Registrar / Patient Service Representative	830	Dental Hygienist	327

<b>Sales</b>	<b>17,340</b>
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<b>BGTOCC</b>	<b>Job Posting</b>	<b>BGTOCC</b>	<b>Job Posting</b>
Retail Store Manager / Supervisor	6,831	Sales Supervisor	491
Sales Representative	5,834	Sales Assistant	255
Real Estate Agent / Broker	1,442	Product Demonstrator	149
Account Manager / Representative	1,285	Membership Sales Representative	132
Account Executive	705	Telemarketer	127



# Occupation Inferred from Degree

- ▶ Allows users to identify jobs that are typical targets of job seekers with sub-baccalaureate or bachelor's credentials.
  - ▶ Infers education, rather than relying on specific posting data which may be silent on education.
  - ▶ Returns far more postings, and offers opportunity to identify all the demand for the skill in occupations at this level.
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# Skill Clusters

- Skills that travel together: programming languages: R, SAS, SPSS, etc.
  - Skills similar in function: meeting planning, calendar management, travel arrangements, appointment setting, etc.
  - Skills that can be trained together: Kanban, Kaizen, Lean Six Sigma, Six sigma, etc.
  - These skill clusters roll up into 28 unique aggregate groups
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# Cluster groups

- ▶ Administration
- ▶ Agriculture, Horticulture, Outdoor
- ▶ Analysis
- ▶ Architecture and Construction
- ▶ Business
- ▶ Customer and Client Support
- ▶ Design
- ▶ Economics, Policy, Social Study
- ▶ Education and Training
- ▶ Energy and Utilities
- ▶ Engineering
- ▶ Environment
- ▶ Finance
- ▶ Health Care
- ▶ Human Resources
- ▶ Industry Knowledge
- ▶ Information Technology
- ▶ Legal
- ▶ Maintenance, Repair, Installation
- ▶ Manufacturing & Production
- ▶ Marketing & PR
- ▶ Media & Writing
- ▶ Personal Care & Services
- ▶ Public Safety and National Security
- ▶ Religion
- ▶ Sales
- ▶ Science and Research
- ▶ Supply Chain & Logistics



# Key Skill Clusters in the Analysis Family

- *Business Intelligence* skills like BusinessObjects, Crystal Reports, and Cognos Impromptu track occupations that develop and test products and processes. Additional skills include analyzing data, defining businesses objectives, advancing reporting frameworks, and improving decision making.
  - *Data Analysis*: Tracks both quantitative and qualitative data analysis skills in a range of analyst positions including IT, finance, business and marketing.
  - *Data Science*: encompasses skills like predictive modeling, predictive analytics, and statistical analysis skills like cluster algorithms and factor analysis.
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A decorative graphic on the left side of the slide. It features a solid red arrow pointing to the right, positioned horizontally. Behind the arrow and extending upwards and to the right are several thin, dark grey, curved lines that resemble stylized grass or reeds. The background of the slide is a light, pale green color with a subtle gradient.

# High Level Reports



# Regional Workforce Demographics (not based on job posting data)

- ▶ What are the demographics (age, gender, race or ethnicity) of my workforce?
- ▶ What does employment and unemployment look like for different segments of my workforce? The last section of the report presents a view of the regional labor force by occupation family (row) and expected level of education (column).
- ▶ A second table presents the projected unemployment using these same metrics. Knowing bubbles in unemployment by factors allows colleges to consider targets for short-term training.

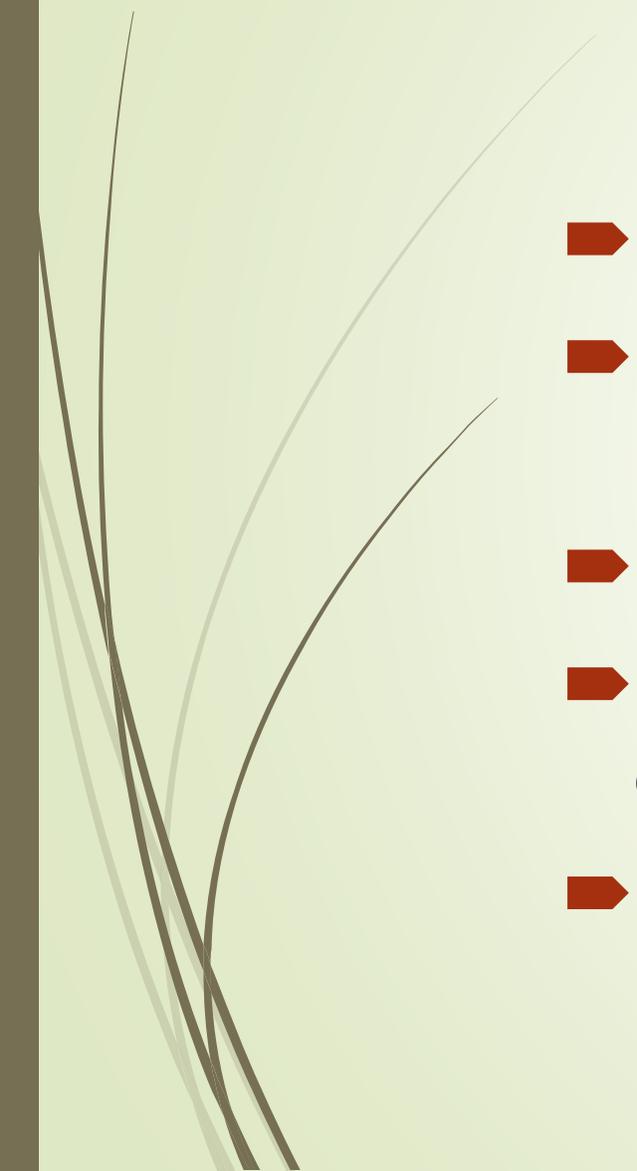


# Regional Analysis – 2Q 2020

- Postings by county
  - Top postings by occupation
  - Top postings categorized into Burning Glass occupation families
  - Top postings by risk of automation, employment projections, mean salary
  - Top hiring industries and employers
  - Top specialized skills and skill clusters
  - Education and levels of experienced requested
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# Side by Side Reports: 1Q vs. 2Q 2020

- Top occupations
  - Top programs of study mapped to the posted occupation
  - Top skills clusters
  - Top industries (4-digit NAICS, middle level of detail)
  - Top employers
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# Detail Reports



# Summary Posting Report

- Number of postings
- Risk of automation (probability of computerization within 20 years)
- Projected statewide change in employment 2016-26, based on federal data
- Mean market salary for the region, based on a Burning machine learning model
- Occupation posting by required level of education (percentage), using both Burning Glass and American Community Survey data. Inferred education is NOT used here.



# Hard to Fill Jobs

- ▶ Postings by demand ranging from low to very high
  - ▶ Time to fill, compared to nation
  - ▶ Concentration (location quotient). How concentrated is a job in a particular geography. Greater 1.2 shows job is unique or specialized in a region.
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