

User Guide Compass: Macro

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LinkUp Compass: An Introduction

Powered by LinkUp's industry-leading job openings dataset, the Compass platform allows users to access top-quality, now-casted job market analytics and visualizations facilitated by Sigma. Compass offers a familiar, intuitive interface that enables rapid-fire queries and deep insights without the need to manage spreadsheets or learn new tools.

Macro Data Package Overview

This high-level dashboard allows users to evaluate the US job market from every angle. The dataset also includes 9 top global markets, with more in development. With LinkUp's best in class job market dataset, users have access to insights and trends built on hundreds of millions of jobs going back over a decade. This page offers forecasts, as well as geographic, industry and occupation level trends over any set period going back to the start of 2012.

Product Timeline:

Macro Monthly: The Macro Monthly product is updated on the 1st of each month.

Macro Weekly: The Macro Weekly product is updated every Sunday.

Data Timeframe: 1/1/2012 - Most recently completed week/month

Toolkit Breakdown U.S. Macro Data Overview

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U.S. Job Listings: Job listings are collected nightly from employer websites and aggregated weekly and monthly for the Macro Compass offering. The U.S. Job Listings visualization displays three different metrics:

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- 1. **Active Jobs**: The count of jobs open on employer websites at any point within each week/month.
- 2. **New Jobs**: New job postings detected by LinkUp's web scraping system during the week/month.
- 3. **Removed Jobs**: Jobs that were detected on a previous scrape and removed from the employer's website during the specific week/month.

U.S. Closed Duration: Closed Duration represents the amount of time jobs removed in a specific week/month were open. It measures the time from the job posting start date to the date the job was taken down. The 6-month Moving Average calculates the average Closed Duration for jobs removed from employer websites over the last 6 months.

MoM% Change in Active Jobs (Geography): This metric shows the change in the number of jobs active on employer websites when comparing the most recently completed month to the previous complete month. It indicates whether states/countries had more or fewer open jobs on their employer websites at any point within the most recently completed week/month compared to the previous period.

MoM% Change in New Jobs (Geography): This metric displays the change in the number of newly posted jobs on employer websites when comparing the most recent completed month to the previous complete month. It shows whether states have posted more or fewer jobs than in the previous completed month.

LinkUp 10K: The LinkUp 10K is a measure of U.S. job listings from the 10,000 largest global employers with the most job openings in the U.S. It is rebalanced weekly/monthly.

LinkUp 10K Index: This visualization takes the start date of the range, assigns it a value of 100, and then compares each subsequent point in time to the original start date.

Goods & Services Index: The Goods & Services Index is an aggregate measure of industries grouped based on their <u>NAICS</u> 2-Digit classification. This visualization takes the start date of the range, assigns it a value of 100, and then compares each subsequent point in time to the original start date. This approach helps compare the two sectors' changes over time from an equal level instead of using absolute values.

Blue Collar & White Collar Index: The Blue Collar & White Collar Index is an aggregate measure of occupations grouped based on their <u>ONET</u> Major Name Occupation. This visualization takes the start date of the range, assigns it a value of 100, and then compares each subsequent point in time to the original start date. This approach helps compare the

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two job classifications' changes over time from an equal level instead of using absolute values.

Goods & Services Closed Duration: This visualization compares the 3-month moving average of Closed Duration for the industries producing goods versus industries providing services, based on their <u>NAICS</u> 2-Digit classification.

Blue Collar & White Collar Closed Duration: This visualization compares the 3-month moving average of Closed Duration for jobs classified as Blue Collar versus White Collar, based on their <u>ONET</u> Major Name Occupation.

Monthly Active Job Listings by Industry: This visualization shows the active job listings grouped by <u>NAICS</u> 2-Digit classification, which is the broadest grouping in NAICS.

Monthly Active Job Listings by Occupation: This visualization displays the active job listings grouped by <u>ONET</u> Major Name, which is the highest level occupation in the ONET taxonomy.

MoM% Change of Active Jobs by Industry: This graph represents the change in active jobs during the most recently completed week/month compared to the previous week/month, grouped by <u>NAICS</u> 2-Digit classification.

MoM% Change of Active Jobs by Occupation: This graph visually represents the change in active jobs during the most recently completed week/month compared to the previous week/month, grouped by <u>ONET</u> Major Name.

Monthly Active Jobs by Remote Status: An area line graph showing trends in remote work for active jobs over the specified timeframe. Users can hover over any part of the graph to get exact numbers for the month/week of interest.

Monthly Active Jobs by Employer Type: A pie chart showing the breakdown of active jobs for the most recent time period being measured. The employer types are Public Company, Private Company, Non-Profit, Post-Secondary Education, K-12 Education, Local Government, and Federal Government. Users can hover over the chart to get exact counts.

Aggregate Labor Demand by Approximate Company Size: This area line graph displays the monthly average of active jobs for each given month, grouped by approximate company size. The approximate company size is determined by the current number of active job listings a company has.

Removed Jobs by Month, Bucketed by Closed Duration: This chart shows the volume of jobs that have closed within specific duration buckets for each month, illustrating trends in job filling timeframes over time.

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Percent Removed Jobs by Month, Bucketed by Closed Duration: This chart displays the percentage of total jobs that have closed within specific duration buckets for each month.

Forecasts:

NFP Forecast: This visualization shows LinkUp's monthly forecast of the NonFarm Payroll numbers reported by the Bureau of Labor Statistics. The graph displays the initial BLS number (reported on the first Friday of each month), the revised number (which can be updated multiple times for several months after the initial report), the consensus estimate from industry experts, ADP's estimate, and the LinkUp forecast. Two separate graphs are provided: a cumulative aggregation over time and an independent monthly chart.

JOLTS Forecast: This visualization presents the Job Openings and Labor Turnover Survey's Job Openings. It shows the historical forecasted numbers from LinkUp, the monthly number reported by the BLS, and the current LinkUp Model Forecasted number.

Global: The Global tab displays data for 10 of the top global economies, broken down individually with Active Jobs, New Jobs, and Removed Jobs metrics.

Global Comparison: The Global Comparison tab allows users to compare specific countries available in the previous tab on the same graph. Users can do this in two ways:

1. Via an index based on the start of the chosen time period

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2. Based on the absolute value of active jobs open in the selected countries over a specific time period.

Geo: The Geo tab enables users to see regional job market trends in the U.S. over a custom date period. Users can choose their start and end dates, and the visualizations on the page will update accordingly with changes in Active and New Job values. The Occupation filter updates the <u>ONET</u> maps to show specific occupation changes by state over time, while the Industry filter updates the <u>NAICS</u> maps to focus on specific industry changes by state over the chosen timeframe.

The Monthly Active Jobs by Top 20 MSAs chart provides a comparison of the top 20 largest job markets in the U.S. in a line chart, allowing users to see changes in active job listings over a specific timeframe. Users can update the MSA filter to focus on one or multiple MSAs for a more precise comparison.

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Data Extraction

The data extraction tab gives users the ability to extract the raw values of the numbers that power our visualizations. These include monthly/weekly values for:

- US Monthly/Weekly
 - Created Job Count
 - Unique Active Job Count
 - Closed Duration
 - Removed Job Count
- State ONET by Month/Week
 - Created Job Count
 - Unique Active Job Count
 - Closed Duration
 - Removed Job Count
- State NAICS by Month/Week
 - Created Job Count
 - Unique Active Job Count
 - Closed Duration
 - Removed Job Count
- Top 20 MSA Monthly/Weekly
 - Created Job Count
 - Unique Active Job Count

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- Closed Duration
- Removed Job Count
- LinkUp 10k by Month/Week
- NFP Forecast by Month

- LinkUp Forecast
- Consensus Estimate
- Initial BLS Number
- Revised BLS Number
- JOLTS Forecast
 - BLS JOLTS number
 - LinkUp Forecast

Data Anomalies

Drift: You may encounter a data anomaly in the LinkUp dataset known as "drift." In the most recent 10 days of our dataset, you may notice an aberrant downward trend in overall job count—this dip occurs as job URLs are temporarily removed from the data set. Drift is the revised upward shift of our historical job counts as those previously undetectable job URLs come back online.

There are several reasons jobs may temporarily disappear from a career page. The site may go down temporarily for maintenance, be formatted incorrectly and rendered "unscrapable" for a period, our scrape system may have an issue with a certain CID, or the company may have changed its ATS or career portal software.

On the day any job disappears or is otherwise undetectable by our scrapers, it is reported as deleted. When the exact same URL re-appears on the page at a later date, we consider that the same job and the delete date is removed from the record. This correction treats the job as if it was never taken down. This procedure is essential for data quality because it avoids duplicating records of the same job, but it does cause what we call drift.