ENGAGE

# AMERICA'S TIGHTEST JOB MARKETS FOR TECH WORKERS

## ...AND THE ONE MISSING INGREDIENT FROM SUPPLY / DEMAND ANALYTICS

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# ABOUT THE ENGAGE RESEARCH SERIES

At ENGAGE Talent, we study the impact of dynamic markets on company's talent retention and on professionals' voluntary turnover. From time to time, we share some of our research results in this article series. In previous research we examined tenure data across professions and industries and the supply/demand impact on tenure of professionals with in-demand skills.

In this research article, we focus on one of the hottest markets: Technology Professionals. We also propose a new framework for better understanding of the real supply of professionals. The new model relies on analyzing who is likely to change jobs instead of the traditional models of relying on an estimate of the total pool size.

In addition to ENGAGE's large set of aggregated data about industries, companies, professionals, and market dynamics, we partnered with Greenwich HR to analyze the demand side of the market leveraging their real-time aggregation and analysis of job postings.

*The ENGAGE Talent Team*

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Come say hi!
hello@EngageTalent.com

# AND THE TOP 4 ARE....

California and New York traditionally had the tightest markets as defined by the ratio of supply of technology professionals to open jobs requiring these specialized skills. Our analysis showed that in the first quarter of 2018, Virginia had the tightest market followed by Maryland, Massachusetts, and Georgia. Even Florida was tighter than both California and New York in the same period.

1. Virginia
2. Maryland
3. Massachusetts
4. Georgia

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# THE SUPPLY OF IN-DEMAND SKILLS AND JOB TENURE MATTERS

There is a clear relationship between supply of in-demand skills and job tenure.

We have shown in previous research that professionals with less common skills that are also in high demand tend to have lower median tenure. This makes sense—due to the relative scarcity of their skills in the market, these workers have more opportunities, making them more likely to job-hop on their own volition. The scarcity of their skills also makes them more likely to be targeted in passive recruiting efforts, since the supply of quality unemployed candidates with those skills is likely to be low.

More precisely, our research revealed that **median tenure for people with a given skill increases by almost one month as the supply of that skill increases one percentage point**. For example, four years and almost four months is the median tenure for a skill when about 2 percent of people have that skill, but as the amount of competition in that area increases to 10 percent of people, median tenure goes up to about four years and 11 months.

If demand for uncommon skills is high, then we can expect quite low tenure—as well as high salaries for those jobs.

# RELATIONSHIP BETWEEN SUPPLY / DEMAND RATIO AND SALARIES

Measurable relationship between supply/demand ratio and salaries.

Unlike the larger labor market current trends, we found a direct relationship between supply/demand ratio and salaries. **For every 10% change in the supply/demand ratio, the salaries being offered increased by average of $1,645.**

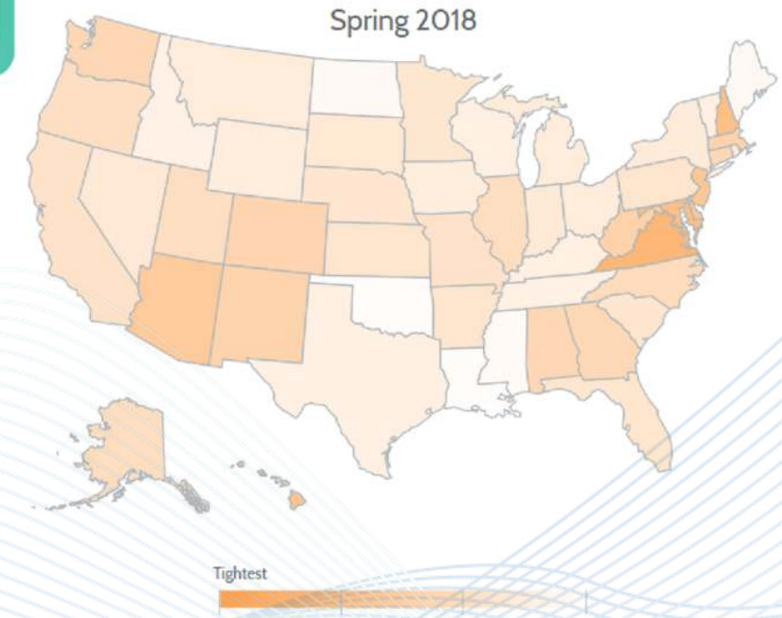
# THE LABOR MARKET FOR TECH PROFESSIONALS

## Labor Market for Tech Professionals

### Supply Demand Ratio

United States

Spring 2018




On average across the US, only 1 in 10 tech professionals is rated as highly likely to ENGAGE with a recruiter about a new job.

TIGHT MARKETS MEAN MO' GREEN

**$1,645**

average salary increase as the ratio of supply to demand goes down 10%

**34** AVERAGE DAYS JOB POSTINGS ARE LISTED

This increases by one additional day as the ratio of supply to demand decreases by 30%

**10 Highest Demand States**

Ranked by the tightness of the market

1. Virginia
2. Maryland
3. Massachusetts
4. Georgia
5. Illinois
6. Pennsylvania
7. Florida
8. California
9. New York
10. Texas

ENGAGE RESEARCH

This research was conducted by ENGAGE Talent in conjunction with Greenwich.HR combining data on open job postings in Information Technology during the month of April 2018 with the available talent currently working in Information Technology to analyze the state of the IT labor market across the United States.

GREENWICH.HR
LABOR MARKET INTELLIGENCE

# THE LARGER LABOR MARKET HAS BEEN DEFYING THIS BASIC ECONOMIC PRINCIPLE FOR A WHILE..

While we are in one of the tightest labor markets in over two decades, the average wages haven't increased as one would expect. Productivity was also stagnant.

The latest employment reports show that we now have more open jobs than there are unemployed workers. It is very likely that the average wages are going to increase which will hopefully lure in more participation. Other medium to long term impacts of the current situation will likely include:

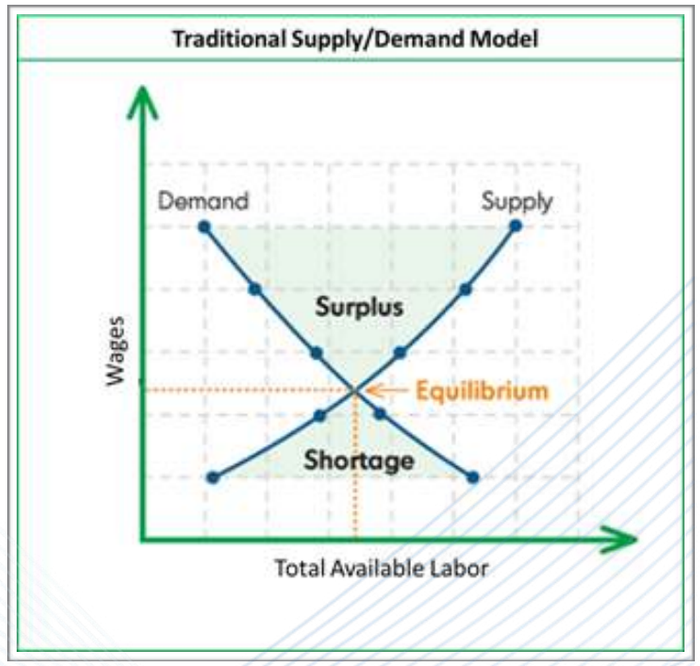
- more focus on improving productivity
- more serious consideration for leveraging automation/AI where possible
- potential serious debate on immigration policy for people with in-demand skills

This brings us to the second part of this analysis where we are introducing a new framework for measuring supply/demand.

# THE TRADITIONAL SUPPLY/ DEMAND MODELS MEASURE "TOTAL LABOR POOL"

Lets start by recalling some ECON 101 basic principles on supply/demand analytics:

- The demand for labor slopes down as the labor gets more expensive. This demand is generally derived from the eventual demand of the product that this class of labor produces; the productivity of this class of labor; profitability of their product; and availability of substitutes.
- The supply of labor slopes up as wages increase. "Wages" traditionally covered total monetary comp including benefits, holidays, etc. plus some basic phycological benefits and the "utility" value of work.




- Equilibrium occurs at the point of "market clearing wage"
- There are lots of studies on the impact of skills gap, migration, automation, taxes, and other factors on the movement along the axis and how these factors create a new equilibrium point.

With traditional tools, analysts only had access to data that measured the total supply of labor in a certain class. That is, everyone with a certain skill or who performs a certain function in a geographical area of focus

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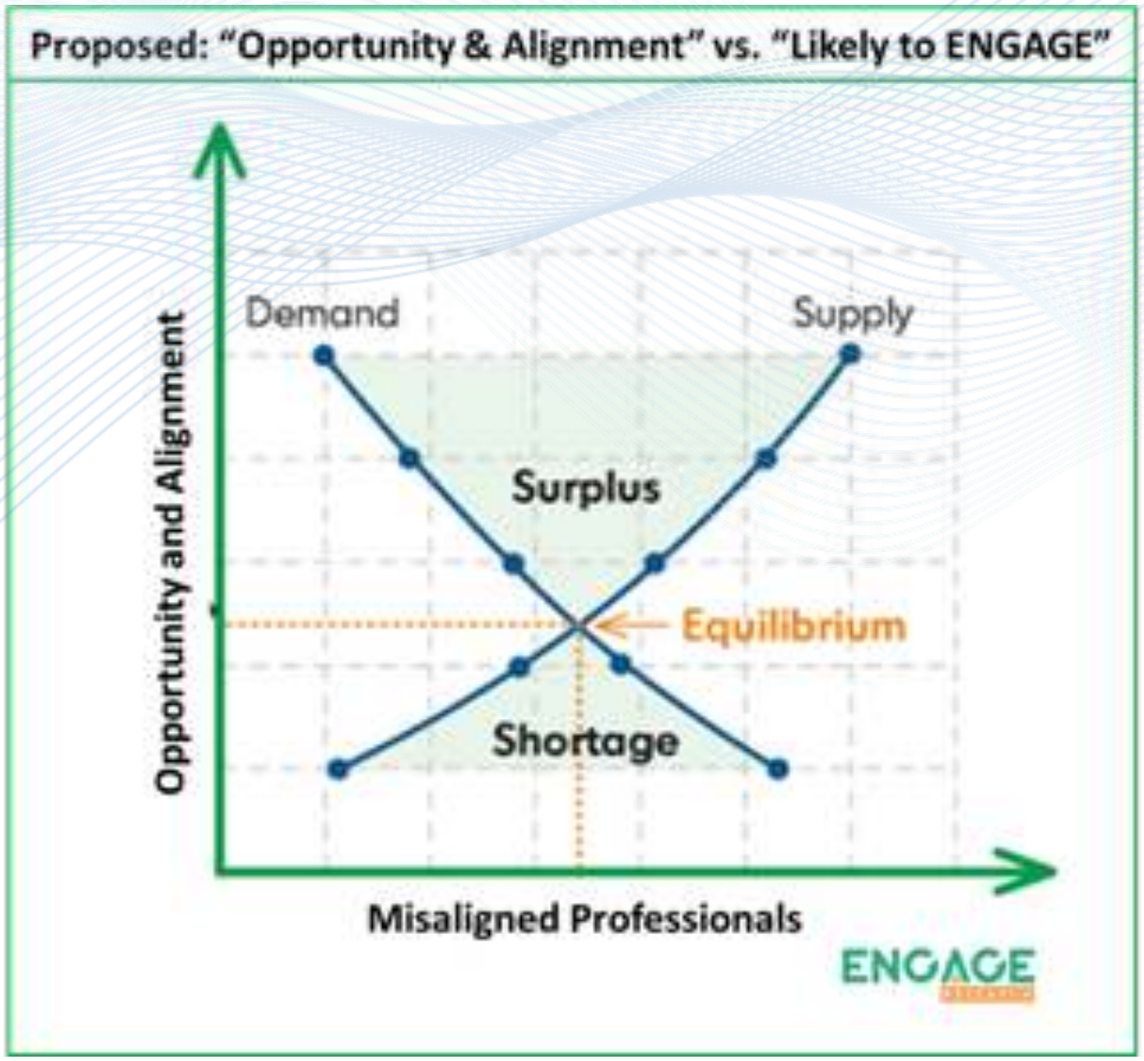
# PROPOSED "AVAILABILITY BASED " SUPPLY/ DEMAND ANALYSIS

The major drawback in the traditional approach is that it doesn't adequately account for how likely it is for this pool of professional to be interested in changing jobs. Understanding the segment of professionals that is likely to be interested in changing jobs allows us to measure the relative difficulty of attracting a certain class in a certain area.

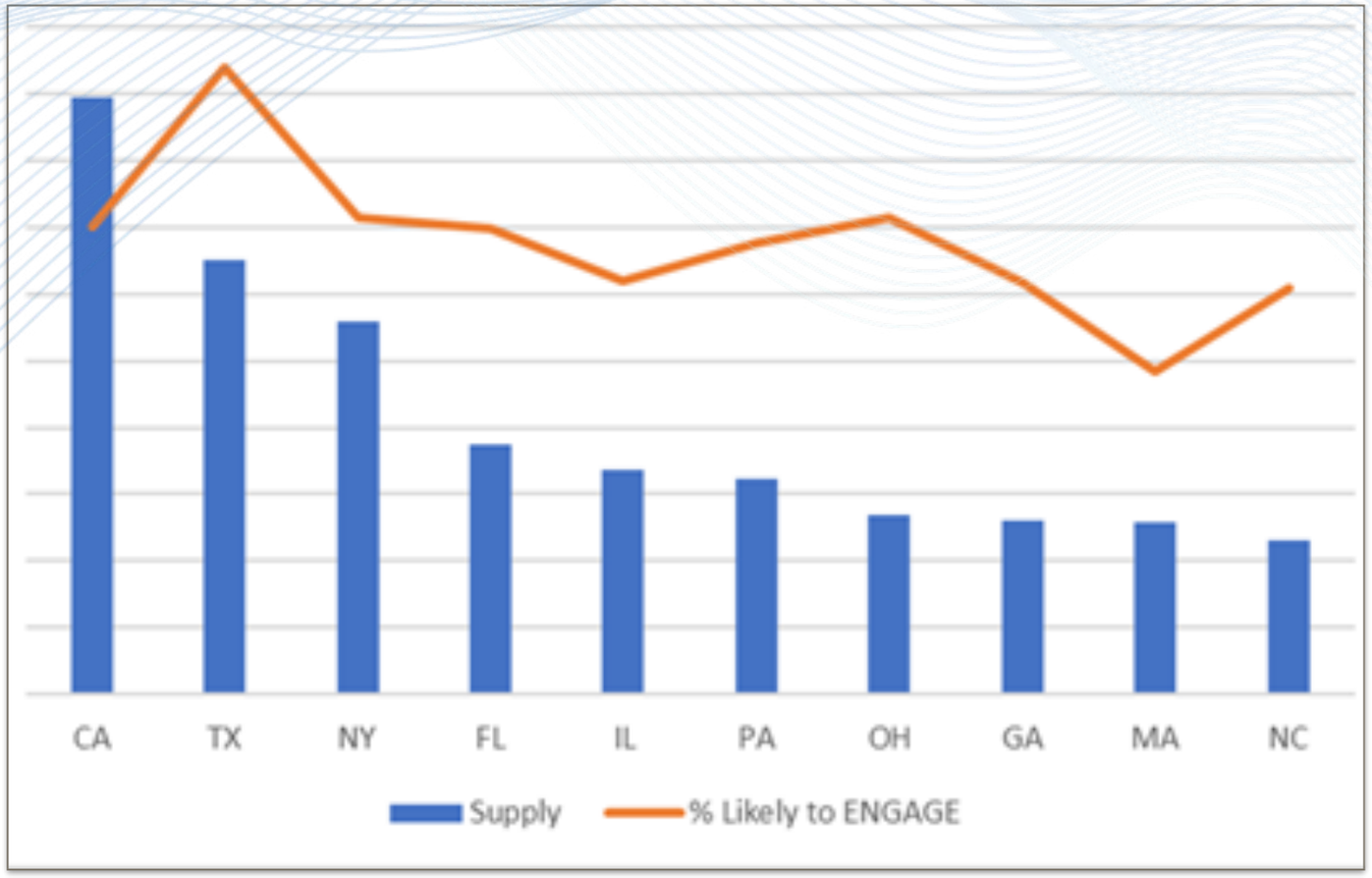
With technologies like ENGAGE, this analysis is now possible.



# PROPOSED "AVAILABILITY BASED " SUPPLY/ DEMAND ANALYSIS

Instead of the "total supply of workers", we are really measuring only those that we have a chance of engaging in a job change discussion. This changes the traditional X-axis to measure only professionals who are likely to change jobs in the near future.

The chart below shows the 10 top states based on supply of IT Professionals (total pool) and the percent of technology professionals who ENGAGE predicts to be likely open to new opportunities (real time prediction). For example, although California has the most supply, Texas has higher percent of professionals who are predicted to engage in job change discussion.

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# TAKE AWAY FOR EMPLOYERS

Companies use strategic workforce planning to forecast current and future staffing needs using a variety of techniques, but the end goal is to limit exposure to surpluses or shortages in labor. Managers need to be able to approximate the level of future demand for the business' goods and services and compare that to the supply of professionals to produce these goods and services.

The accuracy of the analysis and forecasting can be significantly improved by moving from measuring total supply of professionals to leveraging new technologies that can measure truly available professionals (those likely to change jobs).

In Econ 102 terms, this approach to the analysis is analogous to moving from simply measuring nominal wages or GDP to the significantly more meaningful measure of real wages or GDP.

# COME SAY HI!

## ABOUT ENGAGE TALENT

ENGAGE is the world's first AI-powered platform to combine Talent Mapping, Competitive Intelligence, Passive Candidate Sourcing, and Outbound Recruiting in one brilliant Talent Targeting and Engagement engine.

ENGAGE enables active recruiters to efficiently source from a live stream of over 100 million passive candidates or enrich their own CRM and ATS candidates with predictive, AI based insights. ENGAGE continuously monitors your candidates and alerts you with predictive availability signals when a candidate is likely ready for a new opportunity.

Recruiters who leverage ENGAGE's predictive analytics are able to more than double their candidate engagement rates.

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