



Making Use of Real-Time Labor Market Data

CEDEFOP-UNESCO Global Skills Conference
October 20-21, 2016

Bledi Taska, PhD
Lead Economist, Burning Glass Technologies

Collecting Real-Time Labor Market Data

Real-time job market data offer up-to-date insights not possible through traditional sources

**Visit Online
Job Sites**

**Collect &
Deduplicate
Job Postings**

**Read Postings to
Generate Detailed Data**



- Job Title & Occupation
- Employer & Industry
- Technical Skills
- Foundational Skills
- Certifications
- Educational Requirements
- Experience Levels
- Salaries

Burning Glass in a Slide



Drawing conclusions

Insight from in-demand skills and real-life career patterns



A common language

Proprietary Dynamic taxonomy for comparisons



Tagging and structuring

70+ elements of metadata



Capturing job market data

3.4 million active, unique jobs daily

Rich Data:
50,000 sources
500 MILLION jobs
250 MILLION resumes/year

Who Uses Real-Time LMI?

Google

LinkedIn®

accenture

Microsoft

Bloomberg

Manpower®

Dice

salesforce

workday®

Coursera

Education
Advisory
Board

ORACLE® ACADEMY

Northeastern
UNIVERSITY

LONE STAR
COLLEGE

GEORGETOWN UNIVERSITY

University of
Phoenix®

CompTIA®

PEARSON



HARVARD
BUSINESS SCHOOL

GA GENERAL ASSEMBLY



McKinsey & Company

BROOKINGS

JPMORGAN CHASE & CO.



Singapore Government
Integrity • Service • Excellence

Internal Research: The Demand for Coding Skills

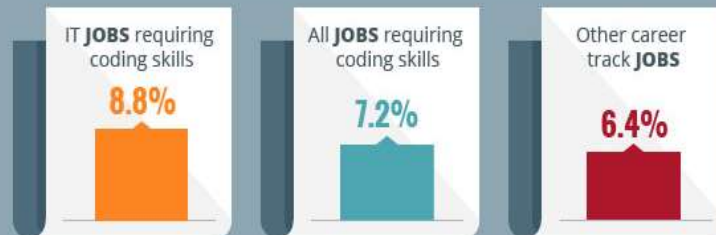
There were **6.8 million job openings** for roles requiring coding skills in the U.S. in 2015.

**CODING JOBS
ARE GROWING
FASTER**



Coding jobs are projected to grow faster than other jobs over the next 10 years.

PROJECTED 10-YEAR GROWTH



**CODING JOBS
PAY MORE**

Jobs requiring coding skills pay **\$22,000** more per year than other career track jobs.*

AVERAGE SALARY PER YEAR



Internal Research: Hybridization of Jobs



**Web Development
& Design**

67,250

Job Counts
Last 12 Months

3%

Change
From 2011

\$87,217

Average
Advertised Salary



**Digital Marketing
& Marketing
Automation**

45,991

Job Counts
Last 12 Months

145%

Change
From 2011

\$76,783

Average
Advertised Salary



**Mobile
Development**

41,032

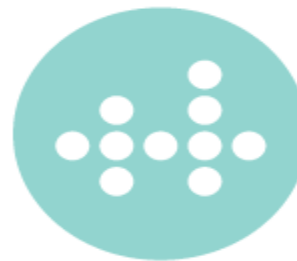
Job Counts
Last 12 Months

135%

Change
From 2011

\$111,380

Average
Advertised Salary



Data Analytics

41,000

Job Counts
Last 12 Months

372%

Change
From 2011

\$105,540

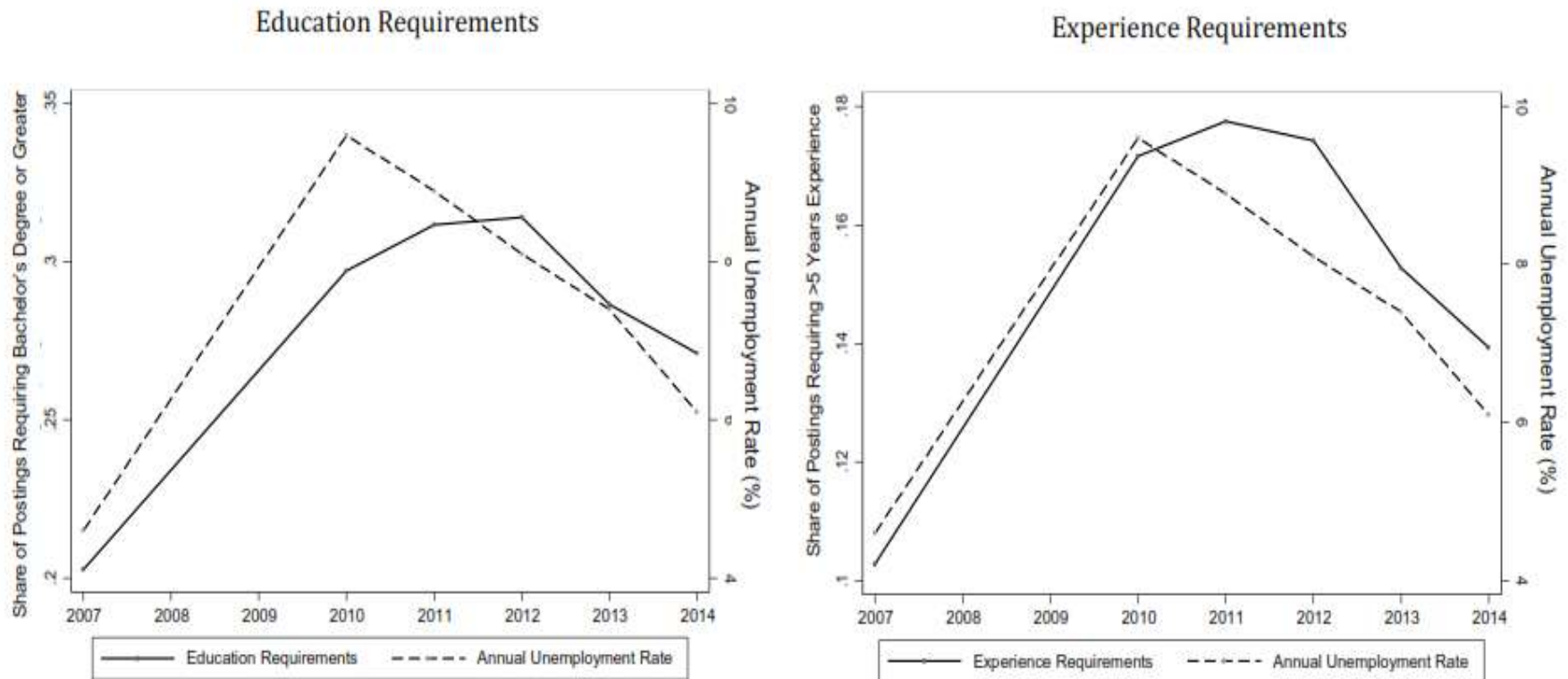
Average
Advertised Salary

Academic Research: Business Cycle and Upcredentialing

1. Hershbein, Brad J., and Lisa B. Kahn. "Do Recessions Accelerate Routine-Biased Technological Change? Evidence from Vacancy Postings." (2016) Working Paper Yale University
2. Modestino, Alicia Sasser, Daniel Shoag, and Joshua Ballance. "Upskilling: Do Employers Demand Greater Skill When Workers Are Plentiful?." Draft, Northeastern University (2015)
3. Modestino, Alicia Sasser, Daniel Shoag, and Joshua Ballance. "Downskilling: changes in employer skill requirements over the business cycle." Labour Economics (2016).
4. Shoag, Daniel, and Stan Veuger. "No Woman No Crime: Ban the Box, Employment, and Upskilling." (2016) Working Paper Harvard University

Academic Research: Business Cycle and Upcredentialing

Figure 1. Relationship between Changes in Employer Requirements and Labor Market Slack, 2007—2014

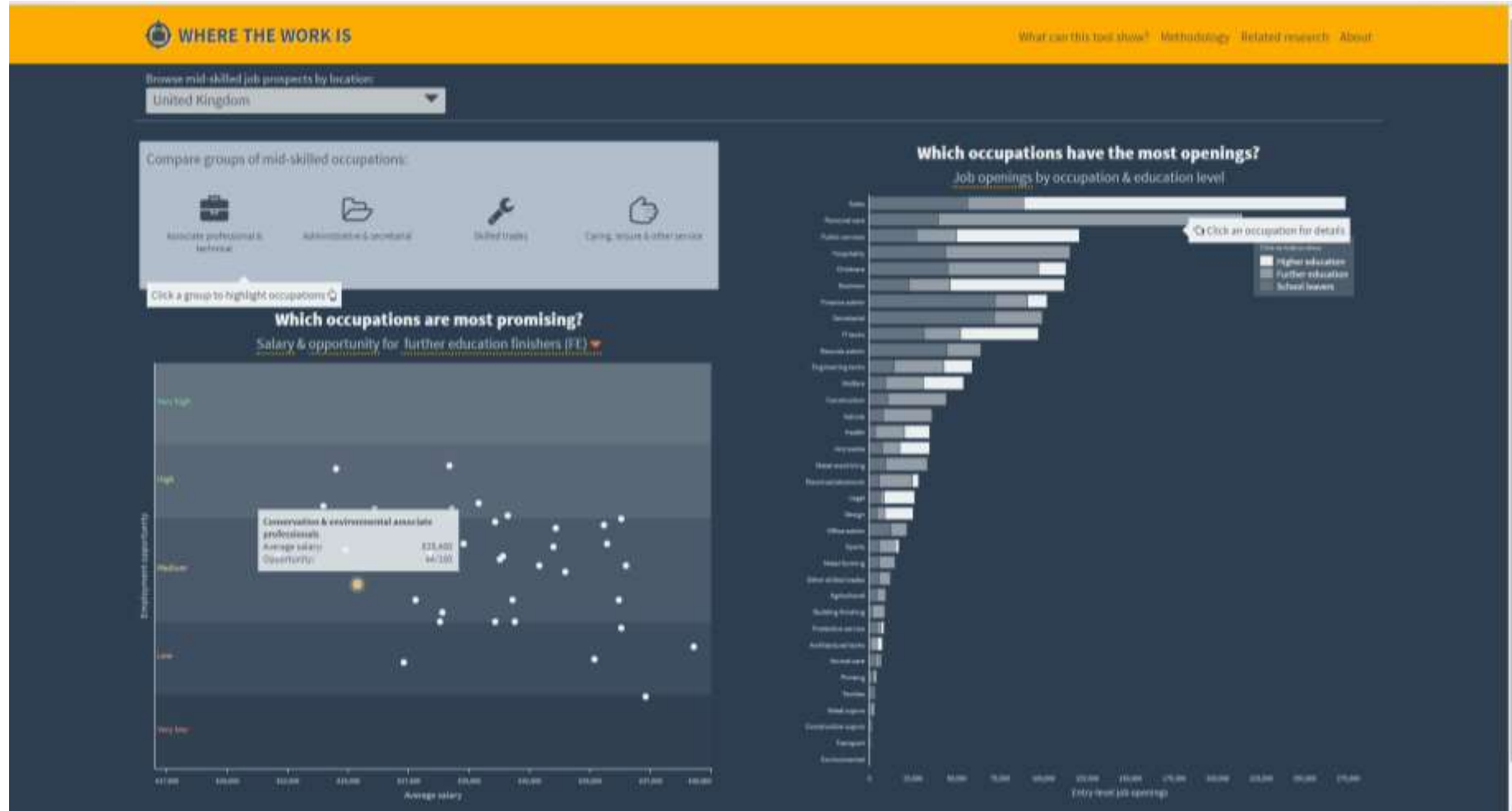


Notes: Authors' analysis using the unemployment rate as reported by the Bureau of Labor Statistics and data on job postings from Burning Glass Technologies, 2007—2014.

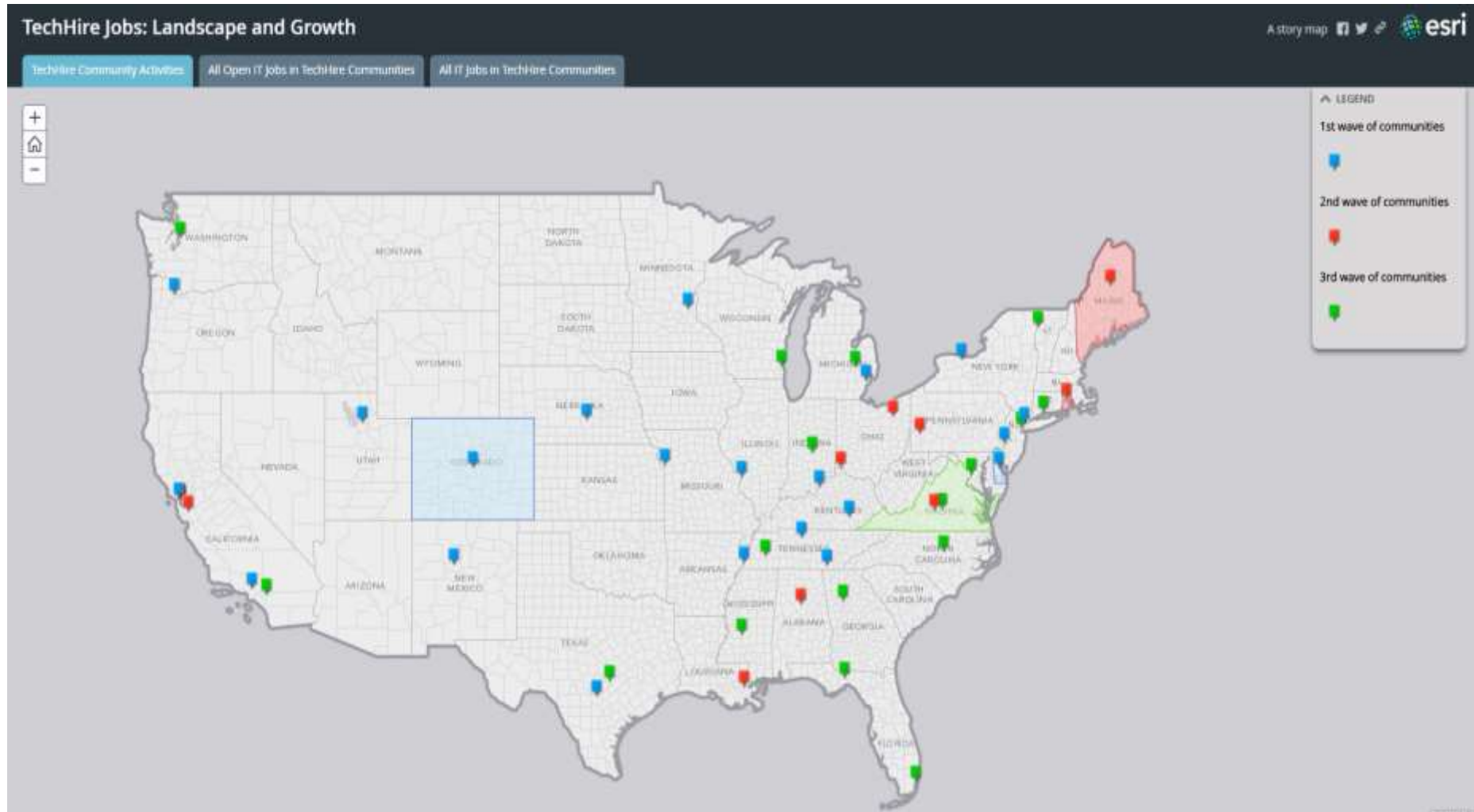
Academic Research: Other Collaborations

1. Deming, David J., and Lisa B.Kahn “Firm Heterogeneity in Skill Demands” (2016) mimeo Harvard University
2. Shoag D, Clifford R. "No More Credit Score" Employer Credit Check Banks and Signal Substitution. (2016) Working Paper Harvard University
3. Rothwell, Jonathan. "Still Searching: Job Vacancies and STEM Skills." Metropolitan Policy Program, Brookings Institution (2014)
4. Wardrip, Keith, Kyle Fee, Lisa Nelson, and Stuart T. Andreason. "Identifying Opportunity Occupations in the Nation's Largest Metropolitan Areas." Special Report of the Federal Reserve Banks of Philadelphia, Cleveland, and Atlanta (2015).[

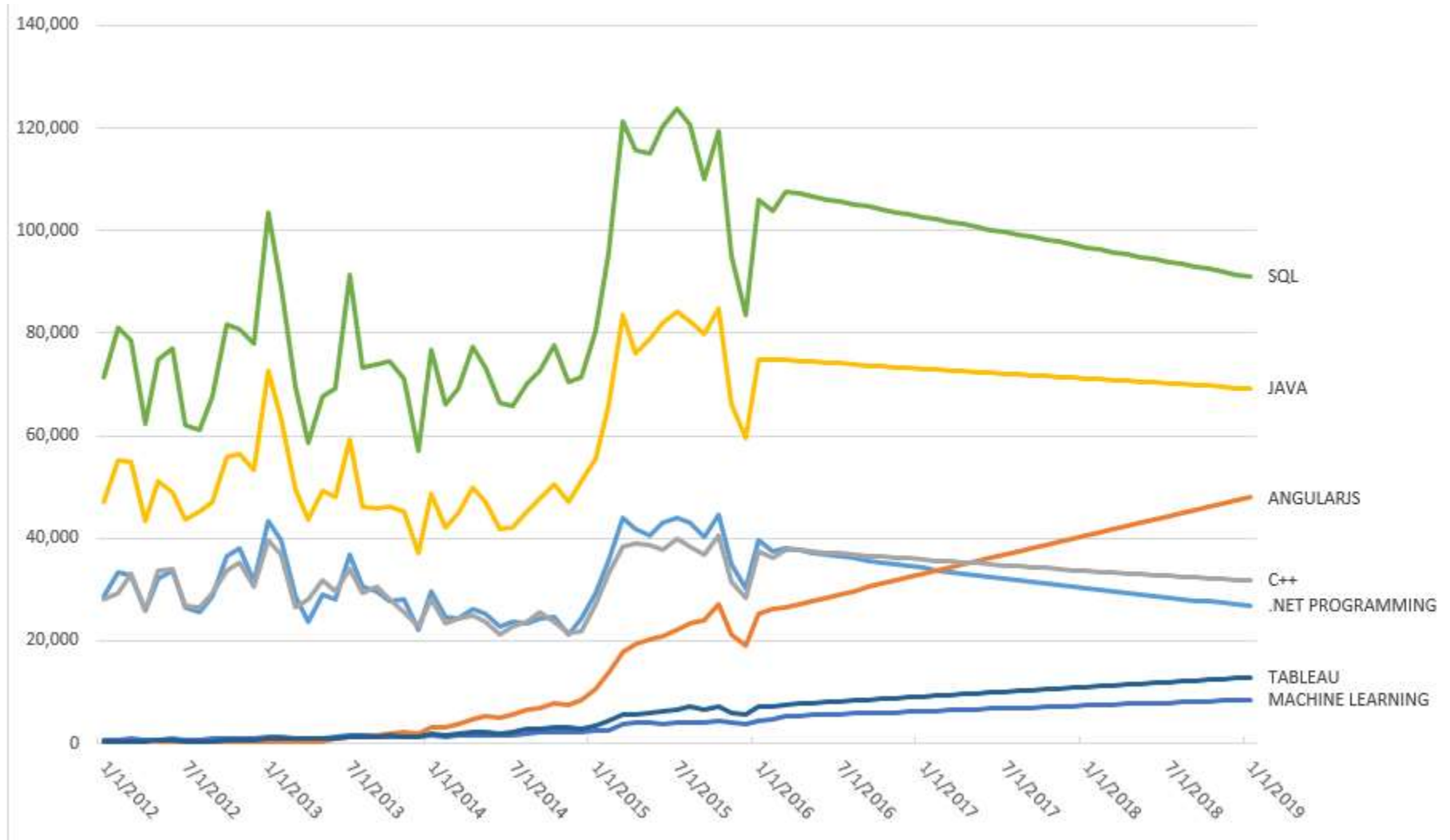
Interactive Tools: Supply-Demand for Mid-Skill Roles in UK



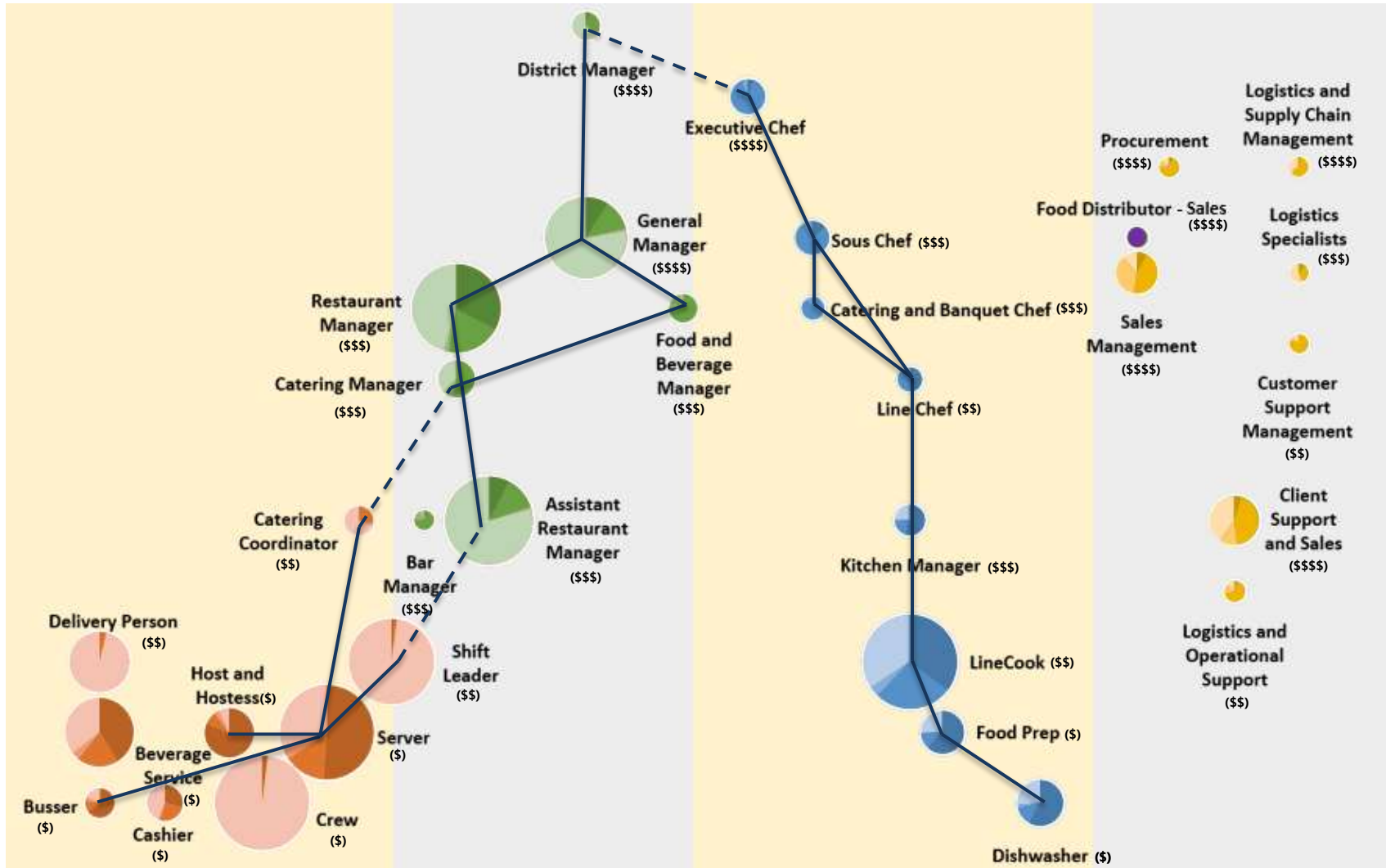
Interactive Tools: Demand for IT Occupations in US



Applications: The Market For Skills



Applications: Career Pathways



Caveats of Using Real-Time Labor Market Data

1. Real-time Labor Market data are a great source to understand the **composition** of labor demand
2. However, great caution needs to be exercised when estimating the **level** and **changes over time** of demand
3. No real information on labor supply or supply of skills. Only proxies like postings duration
4. Not all requirements are listed, and there is some bias on the postings who list specific information (for example law degree for lawyers, or salary information)

Thank you! Questions?