

In-Demand Occupation Analysis *2021*



Nevada Governor's Office of

ECONOMIC DEVELOPMENT

Nevada Governor's Office of

ECONOMIC DEVELOPMENT

In-Demand Occupation Analysis

Identifying high demand occupations

- Target Sector approach
- Real-time job postings
- DETR Occupational Employment Projections
- Brookings STEM Score
- Job openings
- Wages
- Automation Risk
- COVID Risk

Target Sector Approach

- Rankings focused on GOED's target industries:
 - Aerospace and Defense
 - Health Care, Information Technology
 - Manufacturing
 - Logistics & Operations
 - Mining
 - Natural Resource Technologies
 - Tourism & Gaming industries
- Staffing patterns were utilized on the culmination of these industries
- First step in creating staffing demand estimates by occupation for these target sectors

STEM Scores

- Developed by Brookings in 2013
- Comprehensive scoring system to determine the level of STEM knowledge needed to be employed in each occupation
- Defines STEM occupations in two ways:
 - High-STEM in any one field: The occupation must have a knowledge score of at least 1.5 standard deviations above the mean in at least one STEM field.
 - Super-STEM or high-STEM across fields: The occupation's combined STEM score—the sum of the scores from each field—must be at least 1.5 standard deviations above the mean score.
- Since this report was developed prior to the current 2018 Standard Occupational Classification (SOC) system, adjustments were conducted in house to bring the scores up to date.

Location Quotients

- Quantifies how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared state or county containing that region or to the nation.
- It can reveal what makes a particular region “unique.”
- For the majority of occupations, the LQ was calculated using the target sector employment.
 - If an occupation had 200 employees or less, the LQ for all persons employed in the occupation (not just within the GOED sectors), also known as the “economy LQ” was used instead.
 - This approach helps normalize the smaller occupations within the target sectors.

Job Postings

- Using Emsi's Job Posting Analytics unique postings from the most recent one-year period at the time the ranking list was developed (May 2020 - April 2021) were collected for each occupation.
- EMSI Job Postings are collected from hundreds of millions of job postings created by employers.
- Can help measure the demand for talent in a given region.

Wages

- Derived from the OES program
- Occupational wages, which are sometimes referred to as compensation, consist of percentile earnings and average earnings for the occupation
 - For the purposes of the In-Demand Occupation Analysis, average wages for each occupation were utilized
- In the cases of suppressed wages, national wages were supplemented

Employment Projections

- The Bureau of Labor Statistics' Employment Projections (EP) program produces many datasets covering various facets of the labor force updated annually
- Emsi uses the following EP datasets to forecast industry and occupational employment:
 - Occupational Separations and Openings
 - Educational attainment for workers 25 years and older by occupation
 - The Education and training by occupation table
 - The National Industry-Occupation Employment Matrix

Automation Index

- Product of Emsi and captures an occupation's risk of being affected by automation using four measures:
 - Percent of time spent on high-risk work
 - Percent of time spent on low-risk work
 - Number of high-risk jobs in compatible occupations
 - Overall industry automation risk.
- The automation index is presented as a scale with a base of 100
 - An automation index greater than 100 indicates a higher-than-average risk of automation
 - An automation index less than 100 indicates a lower-than-average risk of automation

COVID Susceptibility Index

- The COVID index was created by GOED by weighting job loss, unemployment insurance claims, and change in wage from the peak of the pandemic until the most currently available data for each occupation.
- Each of these factors are then ranked by occupation and then combined to create a score and then converted to a ranking for each occupation
- Any occupation with a ranking greater than 100 indicates a higher-than-average risk of COVID affecting the occupation negatively
- A ranking of less than 100 indicates a lower-than-average risk of COVID affecting the occupation negatively

Creating the Ranking

- Once the data is compiled for each occupation, each factor is weighted
- Weights are determined by expert opinion and regression analysis to derive the most logical and optimal score for all occupations
- Using the weighted scores, the six-digit occupations are then ranked to provide the detailed In-Demand Occupation Ranking list

Creating the Ranking

- Once the data is compiled for each occupation, each factor is weighted
- Weights are determined by expert opinion and regression analysis to derive the most logical and optimal score for all occupations
- Using the weighted scores, the six-digit occupations are then ranked to provide the detailed In-Demand Occupation Ranking list

Ranking by Major Occupational Codes

SOC 2-digit	Description	Score	Rank	2020 Jobs	Jobs Above or Below National Average	Avg. Hourly Earnings
29-0000	Healthcare Practitioners and Technical Occupations	0.9	1	73,258	(9,248)	\$45.53
49-0000	Installation, Maintenance, and Repair Occupations	0.8	2	56,493	52	\$25.81
51-0000	Production Occupations	0.8	3	52,664	(28,908)	\$19.23
17-0000	Architecture and Engineering Occupations	0.9	4	16,798	(7,470)	\$39.39
47-0000	Construction and Extraction Occupations	0.7	5	92,113	24,669	\$26.10
43-0000	Office and Administrative Support Occupations	0.7	6	186,171	5,901	\$18.86
11-0000	Management Occupations	0.9	7	82,795	(6,786)	\$51.13
19-0000	Life, Physical, and Social Science Occupations	0.8	8	10,769	(2,807)	\$34.12
53-0000	Transportation and Material Moving Occupations	0.8	9	130,707	10,453	\$19.77
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	0.7	10	26,059	17	\$29.34
25-0000	Educational Instruction and Library Occupations	0.9	11	57,029	(29,085)	\$25.79
39-0000	Personal Care and Service Occupations	0.7	12	69,608	28,121	\$14.68
13-0000	Business and Financial Operations Occupations	0.9	13	64,565	(20,400)	\$34.24
41-0000	Sales and Related Occupations	0.8	14	148,092	13,996	\$20.30
15-0000	Computer and Mathematical Occupations	1.0	15	24,635	(19,754)	\$38.76
33-0000	Protective Service Occupations	0.6	16	42,206	10,281	\$23.42
31-0000	Healthcare Support Occupations	0.8	17	47,929	(18,215)	\$15.67
21-0000	Community and Social Service Occupations	0.8	18	16,421	(9,371)	\$27.55
45-0000	Farming, Fishing, and Forestry Occupations	0.8	19	4,701	(6,449)	\$17.02
35-0000	Food Preparation and Serving Related Occupations	0.7	20	156,498	48,601	\$13.31
23-0000	Legal Occupations	0.7	21	9,701	(2,738)	\$51.03
37-0000	Building and Grounds Cleaning and Maintenance Occupations	0.7	22	70,268	18,229	\$16.03

Sector Council Input

- For each of the 62 occupations in the Transportation, Distribution and Logistics Career Cluster please provide a ranking (from 1-62) of how important you find each occupation in your industry in Nevada
- This information will be incorporated in the next iteration of the In-Demand Occupation Ranking list

Sector Council Input Example

SOC	Description	2020 Jobs	Jobs Above/Below National Average	Total 2020 Program Completions	Annual Openings	Avg. Hourly Earnings	In-Demand Occupational Rank	Sector Council Suggested Rank
13-1081	Logisticians	917	(993)	30	100	\$30.65	19	10
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	3,833	(573)	5	504	\$26.89	83	26
49-3011	Aircraft Mechanics and Service Technicians	2,027	338	174	242	\$40.47	91	29
53-3032	Heavy and Tractor-Trailer Truck Drivers	14,137	(4,464)	0	1,888	\$24.47	93	53
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1,865	(622)	100	232	\$26.82	98	52
11-3071	Transportation, Storage, and Distribution Managers	1,117	(152)	402	123	\$41.19	118	36
53-5021	Captains, Mates, and Pilots of Water Vessels	165	(219)	0	27	\$43.89	154	29
49-3023	Automotive Service Technicians and Mechanics	5,322	(1,415)	373	692	\$21.84	160	33
53-2011	Airline Pilots, Copilots, and Flight Engineers	1,931	795	12	239	\$112.25	163	59
53-4011	Locomotive Engineers	158	(171)	0	24	\$36.97	184	32

Governors Office of Economic Development

Chelsea Walburg

Research Manager

775-687-9913

cwalburg@diversifynevada.com