



EMERGING



CAREERS



UC San Diego | Extension
2017

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INTRODUCTION

Finding a job can be challenging, but establishing and maintaining a successful career in today's constantly evolving economy can be an even tougher task. Technological advancement and market forces move with such speed that what constitutes an in-demand career or skill always seems to be in flux.

But even with our rapidly changing world, there are constants.

In survey after survey, employers report they want to hire people who are not only well-educated, but also know how to put their knowledge to work. Work readiness means the ability to communicate effectively both in person and in writing—and demonstrate critical thinking and problem-solving skills. It also requires a willingness to adapt to challenges whether they be new technologies or changing economic conditions. Employees who can work collaboratively to address unexpected crises as well as seize upon new opportunities are also in demand.

This year's Emerging Careers Report, which was prepared by the Center for Research on the Regional Economy, a division of UC San Diego Extension, once again underscores the need for these critical skills in all the fields represented, especially in sectors affected by globalization, innovation and demographic shifts.

Technological advances, especially in software, are driving a demand for people who can create new applications and manage and secure increasingly complicated computer networks. Thus, it should be no surprise that software developers, computer systems analysts and information security analysts are highly sought after.

But innovation is about more than technology, as many organizations continue to search for new ways to operate more effectively and efficiently. This shift has resulted in increased opportunities for analysts who specialize in operations research and management strategy. Marketing professionals who can sift through large amounts of data to deliver targeted digital campaigns also continue to be sought after by employers.

As our world becomes more interconnected and the United States becomes increasingly diverse, there also is growing demand for employees who are proficient in multiple languages and culturally astute, generating a need for translators and interpreters. The growth in events and conferences that seek to bring people together through memorable experiences, in turn, has created a strong market for professional meeting and event planners. And an aging population is giving rise to the need for financial analysts who can help people plan and manage their retirement. Health trends, such as the nation's current opioid epidemic, are creating more demand for substance abuse and behavioral disorder counselors.

This year's Emerging Careers Report once again reaffirms that there are a wide range of opportunities for college graduates with a broad liberal arts education. However, today's college grads also benefit from acquiring specific competencies, which enhance employability and work readiness, either through a certificate program or other forms of post-baccalaureate preparation.

So while the job market is bright for recent college graduates and mid-career adults in these fields, without a continuing commitment to staying current as well as upskilling and reskilling to keep pace with an evolving economy, employment options may be diminished. The fact is that a college degree, while often necessary, is no longer sufficient for a good job or a lasting career.

Sincerely,



Mary L. Walshok, Ph.D., Associate Vice Chancellor,
Public Programs; Dean, UC San Diego Extension



METHODOLOGY

Overview

1. Emsi national data filtered by:
 - A. Job change (2016-2026) = greater than or equal to 10,000 jobs (239 occupations)
 - B. Typical entry-level education = bachelor's degree (62 occupations)
 - C. Work experience required = less than five years or none (53 occupations)
2. Occupations sorted by greatest 2016-2026 percent change

Narrative

To determine the top 10 emerging careers for college graduates, researchers analyzed employment projection data from Emsi, a labor-market data company.

Researchers used national data from Emsi to identify careers with projected employment growth numbers (2016-2026) greater than or equal to 10,000. Data was then filtered to show entry-level careers that typically require a bachelor's degree and less than five years of work experience. From this list, researchers selected occupations with the highest projected growth rates to be included as Emerging Careers of 2017.

Additional data sources

Bureau of Labor Statistics (BLS) used for salary ranges, age and gender breakdowns.

Burning Glass Labor Insights used for top employment states and metropolitan statistical areas (MSAs) data.



EMERGING

National Rankings

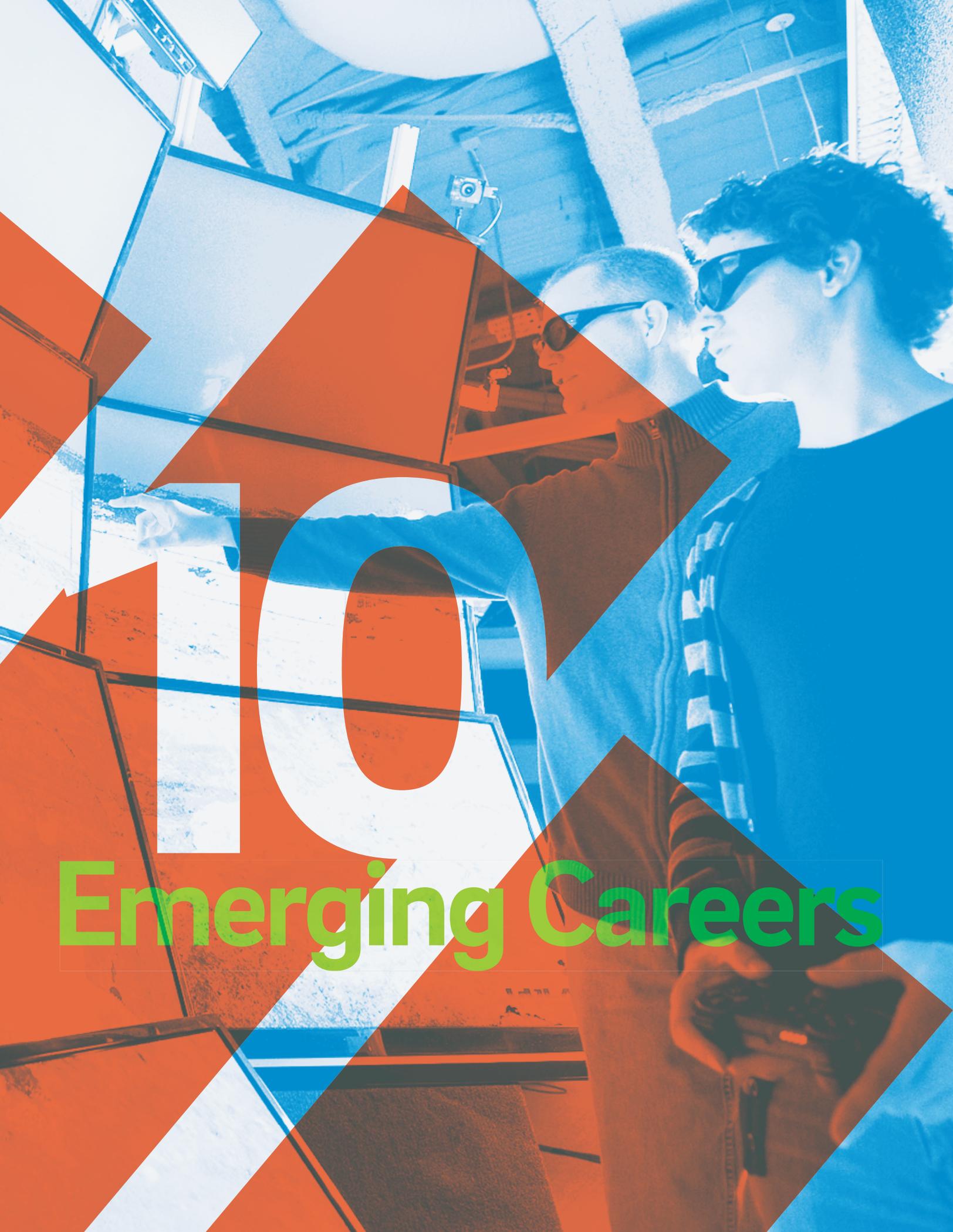
TITLE BY RANKING	EMPLOYED IN INDUSTRY (2016)	EMPLOYED IN INDUSTRY (2026)	CHANGE (2016 - 2026)	% CHANGE (2016 - 2026)	MEDIAN HOURLY EARNINGS	TYPICAL ENTRY-LEVEL EDUCATION
1. Interpreters and Translators	52,015	67,985	15,970	31%	\$21.90	Bachelor's degree
2. Operations Research Analysts	101,944	130,872	28,928	28%	\$38.37	Bachelor's degree
3. Personal Financial Advisors	207,048	260,865	53,817	26%	\$44.19	Bachelor's degree
4. Computer Systems Analysts	574,613	705,594	130,981	23%	\$41.78	Bachelor's degree
5. Software Developers, Applications	774,712	948,527	173,815	22%	\$48.09	Bachelor's degree
6. Market Research Analysts and Marketing Specialists	526,446	638,019	111,573	21%	\$30.72	Bachelor's degree
7. Substance Abuse and Behavioral Disorder Counselors	89,516	107,657	18,141	20%	\$19.51	Bachelor's degree
8. Information Security Analysts	92,076	109,981	17,905	19%	\$43.77	Bachelor's degree
9. Meeting, Convention and Event Planners	90,610	104,727	14,117	16%	\$23.07	Bachelor's degree
10. Management Analysts	639,679	733,772	94,093	15%	\$39.87	Bachelor's degree



CAREERS

San Diego Rankings

TITLE BY RANKING	EMPLOYED IN INDUSTRY (2016)	EMPLOYED IN INDUSTRY (2026)	CHANGE (2016 - 2026)	% CHANGE (2016 - 2026)	MEDIAN HOURLY EARNINGS	TYPICAL ENTRY-LEVEL EDUCATION
1. Operations Research Analysts	1,053	1,336	283	27%	\$40.88	Bachelor's degree
2. Interpreters and Translators	632	777	145	23%	\$23.53	Bachelor's degree
3. Personal Financial Advisors	1,529	1,830	301	20%	\$57.16	Bachelor's degree
4. Computer Systems Analysts	5,611	6,634	1,023	18%	\$44.53	Bachelor's degree
5. Information Security Analysts	815	952	137	17%	\$46.32	Bachelor's degree
6. Substance Abuse and Behavioral Disorder Counselors	693	810	117	17%	\$18.07	Bachelor's degree
7. Market Research Analysts and Marketing Specialists	7,041	8,008	968	14%	\$31.25	Bachelor's degree
8. Meeting, Convention and Event Planners	1,109	1,243	133	12%	\$21.92	Bachelor's degree
9. Software Developers, Applications	10,016	11,165	1,149	11%	\$49.04	Bachelor's degree
10. Management Analysts	8,430	9,378	948	11%	\$39.60	Bachelor's degree



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Emerging Careers

INTERPRETERS AND TRANSLATORS

If you're bilingual, curious about different cultures and like being at the table in a variety of professional situations, a career as an interpreter or translator could be an option. Interpreters, who work in spoken or sign language, find themselves in schools, hospitals, court rooms and conferences. Translators of written documents, meanwhile, can often work from home and have flexible schedules. In our increasingly globalized world, the demand for interpreters and translators will only grow.

SKILL SETS: NATIVE-LEVEL LANGUAGE PROFICIENCY, ACTIVE LISTENING, SPEAKING AND READING COMPREHENSION

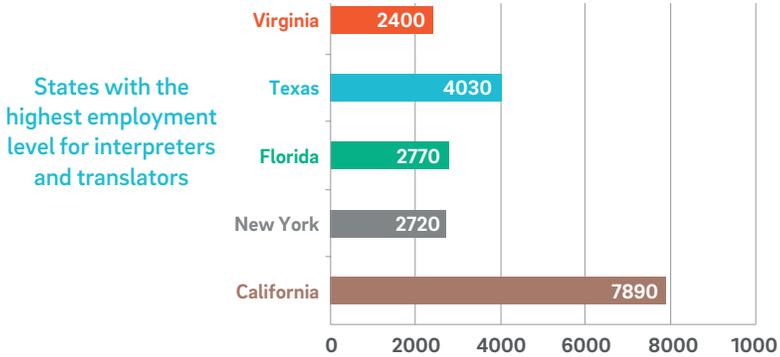
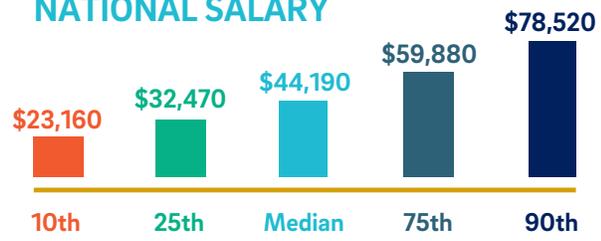
PROJECTED GROWTH 2016-2026 **31%**



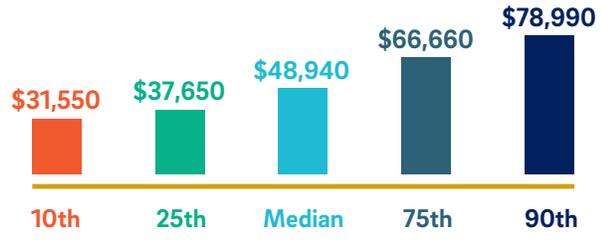
Teri Newman
Director, Medical Connections GmbH

“In the internet age, most interpreting is done via video conferencing. It's easier to hire me sitting in my kitchen in Barcelona than it is to fly me someplace. Presenting in front of a camera is much different than in person. The art of public speaking is another key skill for interpreters now. They have to be able to do the speech like the speaker would and even better.”

NATIONAL SALARY



SAN DIEGO COUNTY SALARY





Philip Koo

Scientist/LSS Black Belt, SPAWAR Systems Center, Pacific

If you have data science and cybersecurity experience, you are a unicorn. You are in high demand and you are hard to find. Major in STEM (short for science, technology, engineering and math) and focus on mathematics and computer science. They are the building blocks for data science, cybersecurity, and of late, artificial intelligence.

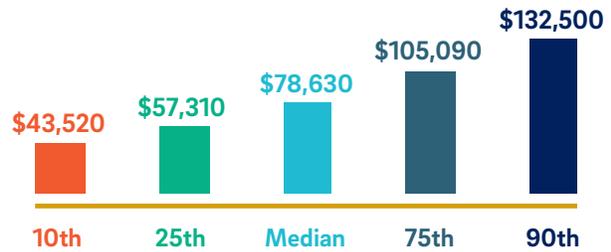


OPERATIONS RESEARCH ANALYSTS

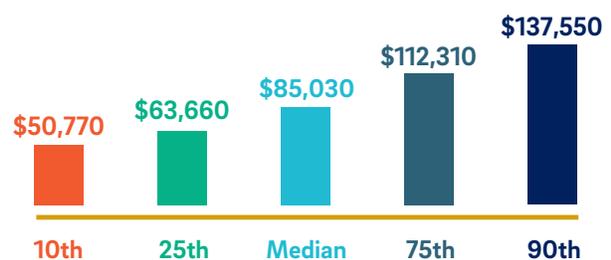
Combine the skills of a mathematician with the mindset of a detective and you have the foundation for a successful career as an operations research analyst. In an age of rapidly advancing technology and fierce competition, companies are always on the lookout for people who can help them work smarter and more efficiently. To this end, they are increasingly hiring operations research analysts who use advanced mathematical and analytical methods to help organizations make better decisions and cut costs. People with these jobs usually have advanced degrees in operations research, management science, math or engineering.

SKILL SETS: HIGH-LEVEL MATH KNOWLEDGE, COMPUTER SKILLS, ANALYTICAL THINKING

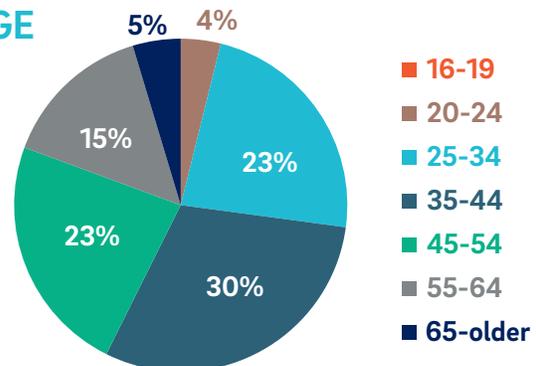
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE

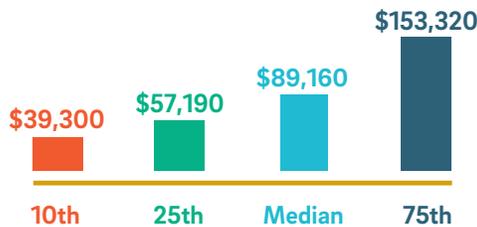


PERSONAL FINANCIAL ADVISORS

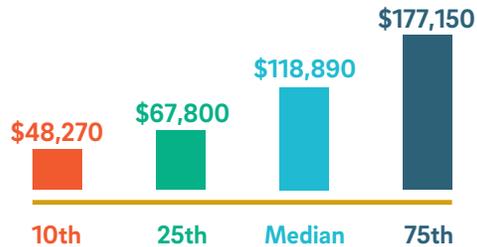
Proficiency in finance coupled with a desire to help people achieve their goals is the basis for a successful career as a personal financial advisor. The job requires an intimate knowledge of investment options along with the ability to listen and understand a client's values and financial goals for everything from mortgages, investments, insurance and even estate planning. As the population ages, so does the demand for financial advisors, with more people turning to financial advisors to help them manage their current finances and plan their retirement.

SKILL SETS: FINANCIAL ACUMEN, STRATEGIC THINKING, ACTIVE LISTENING, INTERPERSONAL SKILLS AND READING COMPREHENSION

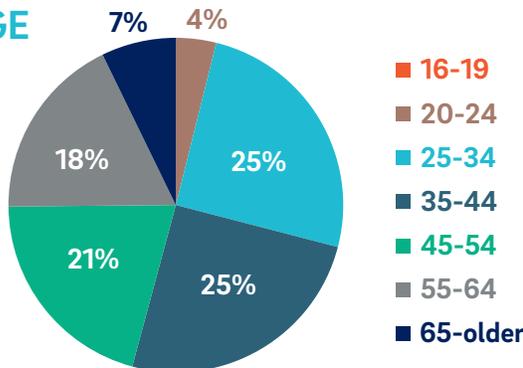
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



PROJECTED GROWTH 2016-2026

26%



Matt Anderson

Financial & Tax Advisor, Reason Financial

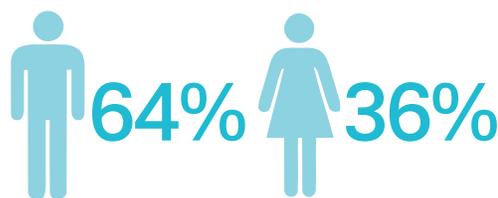
“When I first got in the industry, it was commission and sales driven. Now it's ever more important for people coming into the industry that they be better stewards of their client's interests. We can be held liable for not recommending the most appropriate thing for the client. It forces people in the industry to work on a more professional level.”



Kun Chap

Senior Principal System Engineer,
Leidos

I think analysts today are more specialized. In the commercial world, it's all about collecting data—big data. In a sense, the term, analyst, is becoming outdated. Data scientist is a more up-to-date career path. Before, I would rely on my experience in the field to do the data analysis. Now data scientists are using algorithms and tools instead. It is more automated and more specialized.

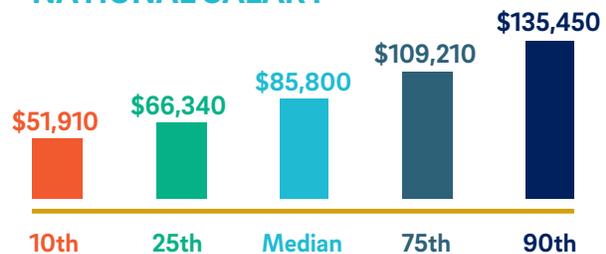


COMPUTER SYSTEMS ANALYSTS

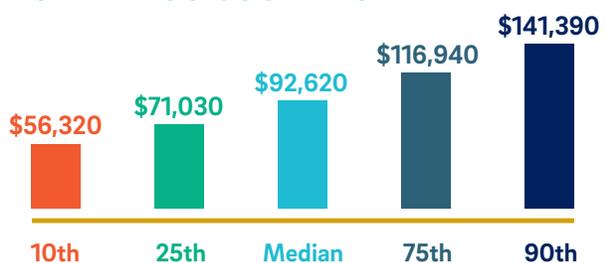
There are few jobs as important to a well-functioning organization than that of a computer systems analyst. People in these jobs are at the center of everything, designing information systems and procedures that help organizations operate more efficiently and effectively. Continued growth in cloud computing, cybersecurity and mobile networks is only increasing the already high demand for systems analysts. These jobs typically require at least a bachelor's degree in computer science, but some firms will hire systems analysts with business or liberal arts degrees who have programming skills.

SKILL SETS: COMPUTER PROGRAMMING, ANALYTICAL THINKING, COMPLEX PROBLEM SOLVING

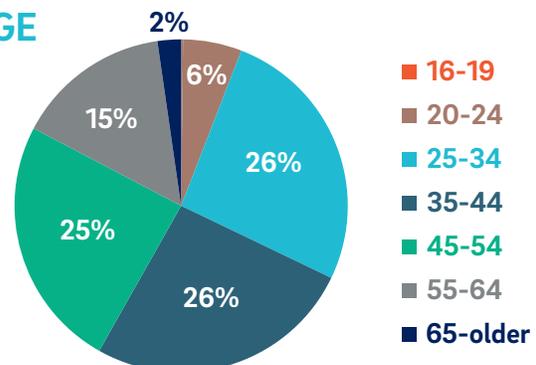
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



SOFTWARE DEVELOPERS

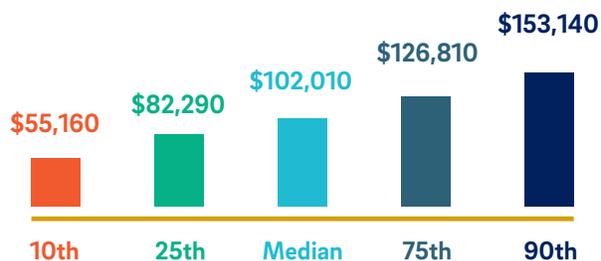
Imagining today's world without software developers is nearly impossible. Software developers are the creative minds behind the computer programs that reach every nook and cranny of our lives. Some develop the apps on our phones or the GPS systems in our cars, while others build the underlying systems that control computer networks. The so-called "internet of things" has created an entirely new dimension of programs to design. Software developers also need good people skills because they often work in teams and must create solutions that address real-world problems.

SKILL SETS: COMPLEX PROBLEM SOLVING, PROGRAMMING, SYSTEMS ANALYSIS, JUDGMENT AND DECISION MAKING

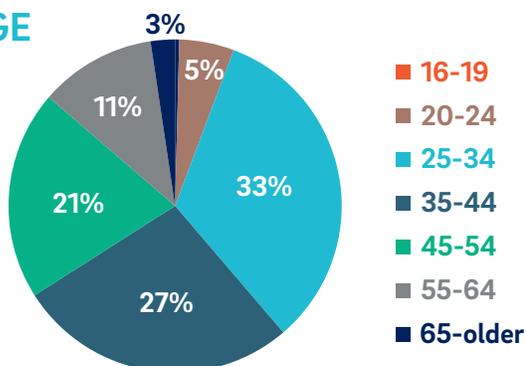
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



PROJECTED
GROWTH
2016-2026

22%



Kent Yang

Senior Technical
Manager, G2 Software Systems

“It’s an exciting time for new developers. They have an easier time getting in the field as well as more choices regarding the tools and languages they want to use. We have more programming choices, more languages and more open source than ever before. Gone are the days of the lone-star programmer. Software development today is about working as part of an agile team.”



Sashi Whitman

Founder, Affinite Magazine

“Social media has created many new opportunities, specifically in data analytics. These days you need a deep understanding of your customer demographics and even psychographics. This means not just collecting data on who your customer is, but also what makes them tick. What are their hobbies? What keeps them up at night? That is another huge area of market research.”

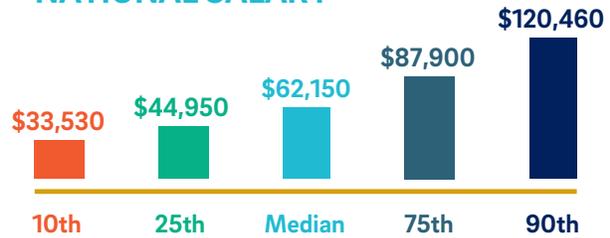


SKILL SETS: READING COMPREHENSION, ACTIVE LISTENING, COMPLEX PROBLEM SOLVING, CRITICAL THINKING AND DECISION MAKING

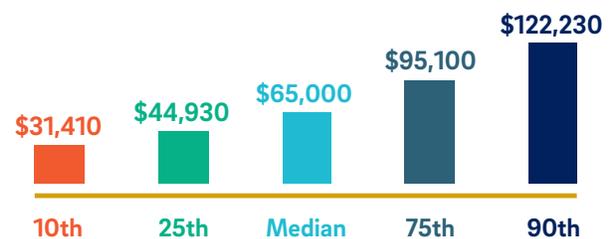
MARKET RESEARCH ANALYSTS AND MARKETING SPECIALISTS

For a person who is naturally curious, analytical and has a wide range of interests, this career can be a good fit. Every product—from a cell phone to a health plan to a pumpkin-spiced latte—must have a well-functioning market to survive. Through their deep study of market conditions, including heavy data analysis, marketing specialists help companies understand what products people want, who will buy them and at what price. People with strong math and critical-thinking skills will likely thrive in this fast-changing field.

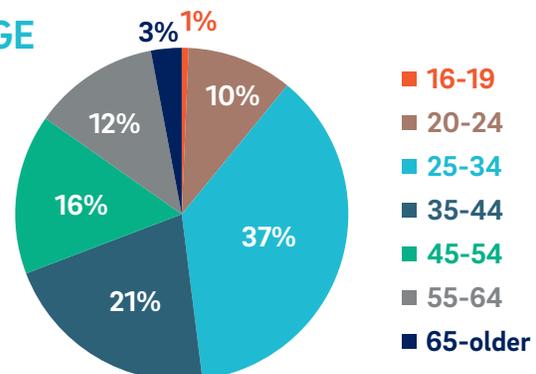
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



SUBSTANCE ABUSE AND BEHAVIORAL DISORDER COUNSELORS

Compassion, patience and a strong understanding of behavioral science are key attributes for someone who wants to be a substance abuse and behavioral disorder counselor. These counselors work with people who suffer from alcoholism, drug addiction, eating disorders and other behavioral problems. They operate in a variety of settings, including mental health centers, prisons and other institutions, and in private practice. In recent years, this work has become increasingly important as communities across the country combat a stunning rise in opioid addiction.

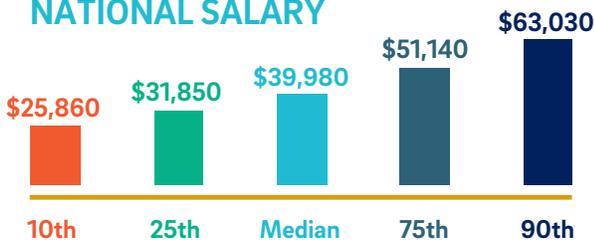
SKILL SETS: ACTIVE LISTENING, JUDGMENT, INTERPERSONAL SKILLS, SPEAKING AND READING COMPREHENSION



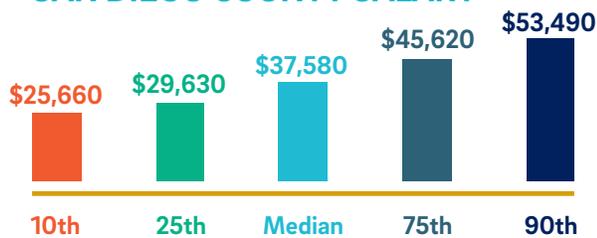
Laurian Cornia
Addictions Counselor/Supervisor,
Naval School of Health Sciences

“The field is changing pretty dramatically with the marriage of mental health care with substance abuse issues. It used to be very separate. Now people realize the cause of substance abuse is a combination of elements and that mental health issues have a lot of influence. Where you find one, 60 percent of the time you will find the other.”

NATIONAL SALARY

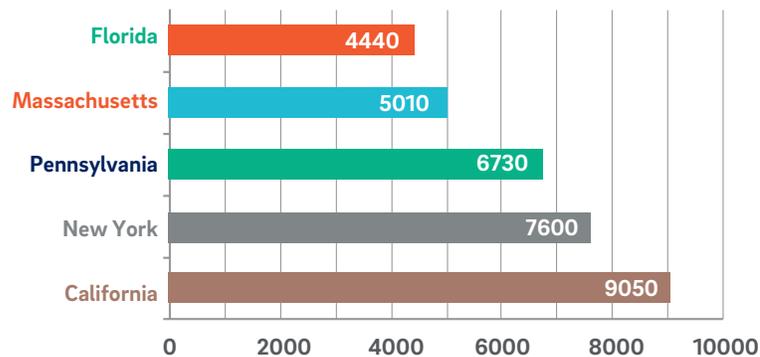


SAN DIEGO COUNTY SALARY



PROJECTED GROWTH 2016-2026 **20%**

States with the highest employment level for substance abuse and behavioral disorder counselors





Arun Khan
*Open Source Technologist,
 Consultant*

“The field is changing very quickly for the very simple reason that new devices keep coming into the market. Each of these products is a gateway into you. There are still attacks on unprotected software and operating systems like before, but now we’re also dealing with data breaches on personal devices and the internet of things. Many things we used to only see in the movies are becoming reality.”

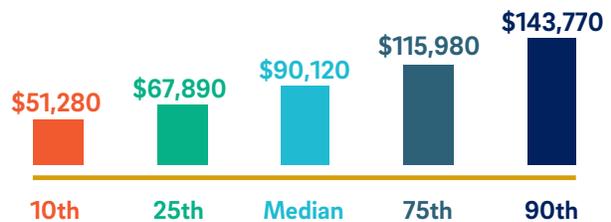


INFORMATION SECURITY ANALYSTS

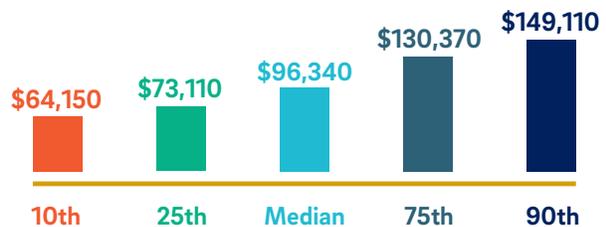
In an increasingly interconnected world, information security analysts are the ones who use their computer and analytical skills to thwart bad actors and make the online world a safer place. Information security analysts develop plans and write programs to protect everything imaginable—from email servers to bank accounts to medical records—from cyberattack. Demand for these workers has exploded in recent years as hackers have become more sophisticated.

SKILL SETS: CRITICAL THINKING, READING COMPREHENSION, COMPLEX PROBLEM SOLVING, SPEAKING, ACTIVE LISTENING

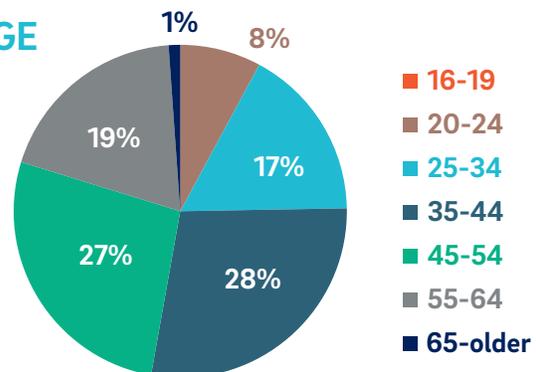
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



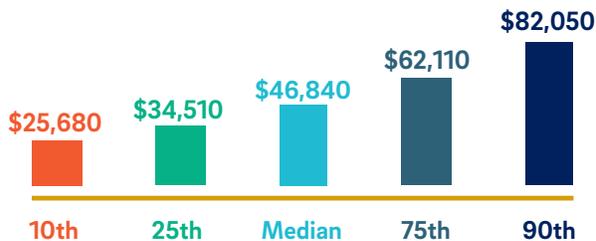
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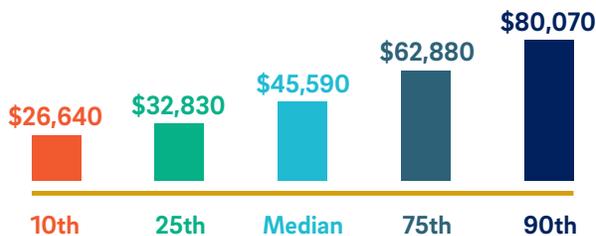
MEETING, CONVENTION AND EVENT PLANNERS

A career as a meeting, convention or event planner requires someone with an eye for detail and an understanding of how to create memorable experiences. People in these jobs do a lot of traveling and are in charge of everything from arranging meeting locations to transportation to entertainment. In this age of globalization, the demand for professionally planned meetings and events continues to grow. A background in the hospitality industry is a plus.

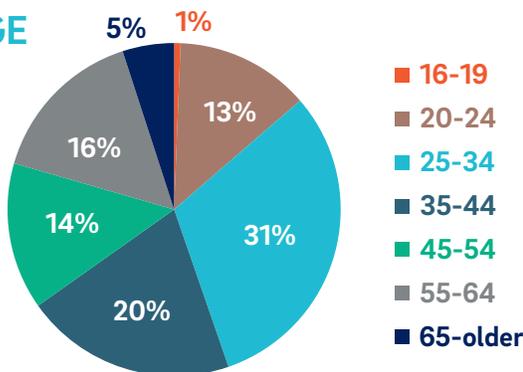
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



PROJECTED GROWTH 2016-2026

16%

SKILL SETS: ACTIVE LISTENING, HIGH-LEVEL ORGANIZATION, INTERPERSONAL SKILLS, JUDGMENT AND DECISION MAKING



Annette Gregg

Regional Senior Vice President, AlliedPRA

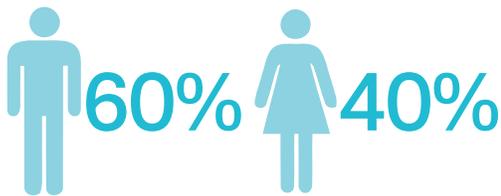
“A trend we are seeing in the field is no longer just people with titles like ‘meeting and event planner.’ Now you have jobs with the title of ‘experience designer.’ It’s much more than simply a meeting and event—you are really trying to create an experience. We are elevating the way we approach our work—going beyond just logistics to how you are going to touch the minds and hearts of the attendees.”



Tracy O'Rourke

Managing Partner and Executive Advisor, GoLeanSixSigma.com

"We are pretty much in every industry. I have clients in education, government, manufacturing and restaurants. I think what is changing is that people are realizing that the approach is important. Companies are looking for people with different skill sets. It's important to have statistical skills, but emotional intelligence is crucial. If they don't have the people piece, they won't be as successful."

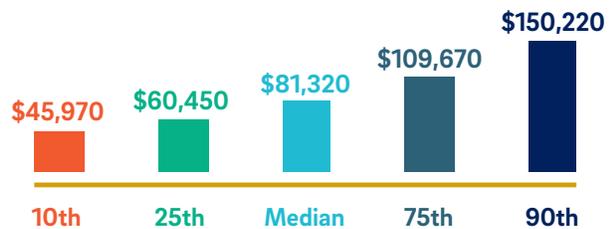


MANAGEMENT ANALYSTS

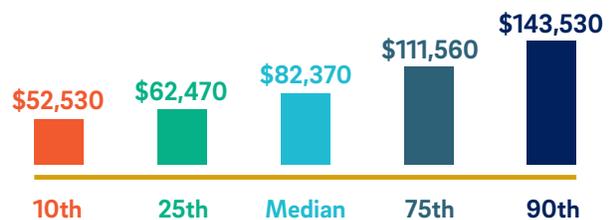
The business world is as competitive as it's ever been, and companies need to squeeze every ounce of productivity out of their work force. This reality means management analysts, also called management consultants, are in high demand. People in this field work with organizational leaders to scrutinize every aspect of a company's operations. The ultimate goal is to maximize efficiency, cut costs and improve the bottom line. Some management analysts are full-time employees of companies they advise, but often they are brought in as independent consultants.

SKILL SETS: ACTIVE LISTENING, READING COMPREHENSION, SPEAKING, CRITICAL THINKING, COMPLEX PROBLEM SOLVING

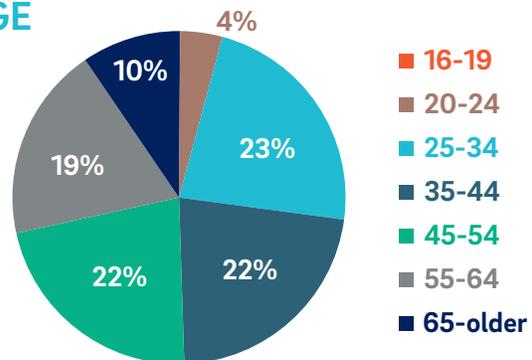
NATIONAL SALARY



SAN DIEGO COUNTY SALARY



AGE



RESEARCH TEAM

DR. JOSH SHAPIRO

Dr. Josh Shapiro is the director of research and evaluation at the Center for Research on the Regional Economy at UC San Diego Extension. His current evaluation projects cover a wide range of topics, including healthcare, advanced manufacturing, STEM education and the role of philanthropy in economic development. He has worked on a number of labor market and innovation reports, including a grant from the National Science Foundation on the role social and cultural dynamics play in regional economic development. Dr. Shapiro was one of the core evaluators on the effectiveness of the Department of Labor's \$500 million WIRED initiative, which involved 15 regions across the United States. He also leads Extension's market research team, which focuses on assisting educational programs to conduct market research and curricula development for workforce and education training programs. Dr. Shapiro has taught classes on research methodology for UC San Diego and is trained in both qualitative and quantitative methodologies with a specialization in survey design. Before attending graduate school, Dr. Shapiro worked in the conflict resolution field in Washington D.C., served as a public school teacher in South Carolina and built homes with Habitat for Humanity in Louisiana. Dr. Shapiro holds a Ph.D. and M.A. in sociology from UC San Diego and a B.A. in social thought and analysis from Washington University in St. Louis.

GLADYS BUSTOS-SELFRIDGE

Gladys Bustos-Selfridge is a research associate with UC San Diego Extension. She has led numerous research studies, developing surveys, conducting in-depth interviews and leading focus-group efforts. Selfridge has experience working with workforce agencies, education systems, high school districts, community colleges and universities. She earned her bachelor's degree at UC San Diego, graduating with honors in 2009.

GINA CARTON

Gina Carton is a research associate with UC San Diego Extension. She has experience conducting research on a variety of topics, ranging from workforce development to education. She earned her bachelor's degree in political science at UC San Diego.



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