

# Employment in New York State

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Department  
of Labor

RESEARCH AND STATISTICS

## At a Glance

New York State had 8,710,300 total nonfarm jobs in September 2020, including 7,285,400 private sector jobs, after seasonal adjustment. The state's seasonally adjusted private sector job count increased by 1.0% in August-September 2020, while the nation's job count increased by 0.7% over this period. From September 2019 to September 2020, the number of private sector jobs decreased by 12.1% in the state and by 6.9% in the nation (not seasonally adjusted).

In September 2020, New York State's seasonally adjusted unemployment rate decreased from 12.5% to 9.7%. The comparable rate for the nation in September 2020 was 7.9%.

New York State's seasonally adjusted labor force participation rate decreased from 60.8% in August to 58.5% in September 2020.

## Change in Nonfarm Jobs

September 2019 - September 2020  
(Data not seasonally adjusted, net change in thousands)

	Net	%
Total Nonfarm Jobs	-1,073.2	-11.0
Private Sector	-1,005.7	-12.1
Goods-producing	-81.5	-9.4
Nat. res. & mining	-1.0	-17.9
Construction	-38.2	-9.1
Manufacturing	-42.3	-9.6
Durable gds.	-21.9	-8.6
Nondurable gds.	-20.4	-11.0
Service-providing	-991.7	-11.1
Trade, trans. & util.	-177.5	-11.5
Wholesale trade	-35.0	-10.7
Retail trade	-91.9	-10.2
Trans., wrhs. & util.	-50.6	-16.2
Information	-13.0	-4.7
Financial activities	-35.4	-4.9
Prof. & bus. svcs.	-148.4	-10.8
Educ. & health svcs.	-140.1	-6.6
Leisure & hospitality	-357.1	-36.6
Other services	-52.7	-12.8
Government	-67.5	-4.6

More fashion firms use tech to stay competitive....

## How Technology Is Transforming the World of Fashion

*"Reimagine Retail" was a powerful example of what happens when fashion partners with a global tech leader to advance challenging innovations."*

Michael Ferraro,  
Fashion Institute of Technology

As noted in last month's issue, many industries have ramped up their use of automation during the pandemic. It might surprise many people to learn fashion is one industry where technology has become more prevalent and more important.

Traditional fashion retailers fight an uphill battle to survive. The past decade brought an onslaught of competition from online retailers who can conduct business at a fraction of the cost of brick-and-mortar stores. And 2020 brought its own set of challenges, as the world tried to navigate a global pandemic. Here, we look at how technology is helping to transform the \$2.2 trillion global fashion industry.

### Collaborative Fashion

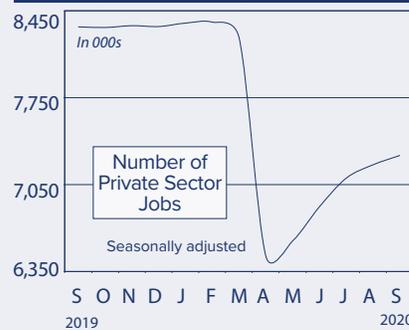
The world of fashion technology is growing faster than ever. The digital age continues to create major shifts in the retail market as consumers switch from in-person to online shopping. The rapid rise of e-commerce has forced many brick-and-mortar retailers to rethink their business strategies and to make greater use of technology in order to remain competitive.

One way retailers attempt to gain an edge is by combining "big data" – the analysis of extremely large data sets to reveal important patterns, trends and associations – with artificial intelligence (AI). Brands partner with data giants to collect and analyze information. They use it to help predict what their customers will want to wear in the future. For example, clothing brand Tommy Hilfger recently partnered with IBM and Manhattan-based

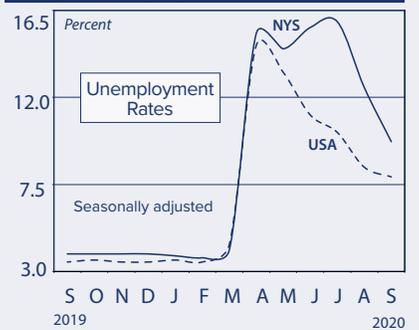
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## In September...

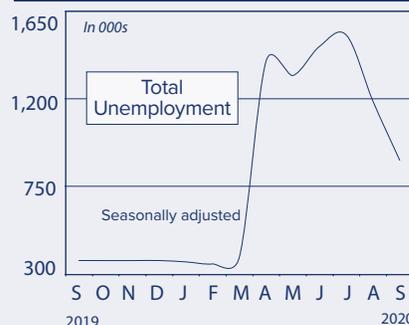
...NYS private sector jobs increased



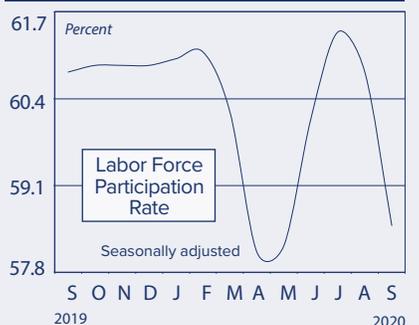
...NYS unemployment rate decreased



...NYS unemployment decreased



...NYS LF participation rate decreased



## Focus on Long Island

### Recent Developments in Long Island's Innovation Economy

by Shital Patel, Labor Market Analyst, Long Island

Long Island's leaders have long been touting it as the next Silicon Valley. The region is a hotbed for innovation, with world-class research centers and competitive universities. Like Silicon Valley, local officials and economic developers hope that Long Island can tap the economic potential of its research centers to create high-paying jobs in the region. In this article, we review some of the region's recent major developments within the science and technology industry.

#### Atom-Smashing Supercollider Coming to LI

In January 2020, the U.S. Department of Energy (DoE) announced it had selected Brookhaven National Laboratory (BNL) as the site for a \$2 billion electron-ion collider (EIC), which will help to put the U.S. at the forefront of scientific research. The new collider — which will be built underground in a circular tunnel spanning 2.4 miles in circumference — will run high energy beams in opposite directions through two individual tubes. The tubes intersect and collide at several points along the ring, which allows researchers to study the inner workings of protons and neutrons. Specifically, scientists will study gluons, which are the matter believed to bind key molecular building blocks known as quarks.

Beyond scientific discoveries in nuclear physics, the EIC at BNL is expected to spark technological breakthroughs in diverse areas, such as medicine, computer technology and national security. The new collider is expected to create as many as 4,000 construction jobs over the next decade and help retain 1,000 existing jobs at the lab. Additionally, the EIC will bring

a community of nearly 1,000 scientists from 30 countries to work at the facility in Brookhaven. The EIC is expected to be operational in 2030.

#### Quantum Computing

In July, the DoE committed \$115 million to BNL to establish one of five National Quantum Information Science Research Centers. BNL will lead a team of researchers from Stony Brook University (SBU), IBM and MIT to help resolve performance issues with today's quantum computers. Current computing technology uses strings of ones and zeros to encode and transmit data, while quantum computers use quantum bits, or qubits. These qubits are very delicate, so the team at BNL will research materials, devices and software to help achieve a "quantum advantage," where quantum computers outperform classical computers.

Researchers at SBU and BNL are also working on the building blocks of a "quantum internet," which, like quantum computers, uses qubits of information rather than the "bits" of information that today's networks use. A quantum internet, which is still decades away from fruition, would be capable of sending enormous amounts of data faster than the speed of light. Qunnect LLC — a three-year-old spinoff company from the Quantum Information Technology group at SBU — is licensing quantum networking technology developed at the university. The company plans to market a quantum memory device that can operate at room temperature.



#### COVID-19 Research

Three Long Island companies are currently developing COVID-19 vaccines. Codagenix, a small biotech company based at the Broad Hollow Bioscience Park at Farmingdale State College, recently completed pre-clinical studies of its CDX-005 vaccine candidate. It expects to begin Phase 1 human clinical trials by the end of this year. Applied DNA Sciences Inc., which is located at the Long Island High Tech Incubator at SBU, plans to begin testing its vaccine candidate. A third company, Hauppauge-based Covaxx, has begun testing its lead vaccine candidate in a Phase 1 human trial in Taiwan. In another aspect of COVID-19 research, the Feinstein Institutes and the Northwell COVID-19 Research Consortium have been studying potential COVID-19 therapeutics.

#### Looking Forward

One of Long Island's biggest competitive advantages is its highly educated workforce. More than 47% of people living in Nassau County (ages 25 and up) and 38% of people in Suffolk County have a bachelor's degree or higher. This compares favorably to the nation's 33% figure. For Long Island to become the next Silicon Valley, the region must focus on investments that retain its educated workforce and attract new research talent to the area.

#### Technology and Fashion... from page 1

Fashion Institute of Technology, which is part of the SUNY system, on a project called "Reimagine Retail."

The collaboration used AI to identify important future industry trends and to improve the overall fashion design process. IBM's AI research tools analyzed customer sentiment related to Tommy Hilfiger's clothing line. They identified key themes in patterns, silhouettes, colors and styles. The AI quickly analyzed the entire database of text and visual data, which would be impossible for clothing designers to do on their own in a timely manner. The project highlighted the mutually beneficial

relationship AI and designers can create when they collaborate.

Other retailers also factor in AI to drive their business decisions. Stitch Fix, a popular online subscription clothing service, is a leader in AI-driven fashion. As a subscription-based business, Stitch Fix collects a great deal of data and feedback from its customers. They have more than 85 data scientists who oversee machine-learning algorithms to help make decisions for all areas of their business, including client styling, logistics and inventory management. According to Eric Colson, the Chief Algorithms Officer at Stitch Fix, the company already

sees returns on its AI investments. They are experiencing increased revenue, decreased costs and improved customer satisfaction.

#### The Rise of Augmented Reality (AR) and Virtual Reality (VR)

AI has proven to be a smart investment for fashion brands, and it also is changing the way consumers experience fashion. Brick-and-mortar clothing retailers have shrunk their physical footprint over the last decade in response to the rapid rise of online shopping. The global pandemic accelerated this downsizing trend. Analysts note, however, that while in-person retail shopping has not gone away, its purpose has evolved.

## Unemployment Rates in New York State

Data Not Seasonally Adjusted

	SEP '19	SEP '20		SEP '19	SEP '20		SEP '19	SEP '20
<b>New York State</b>	<b>3.6</b>	<b>9.4</b>	<b>Hudson Valley</b>	<b>3.6</b>	<b>6.5</b>	<b>Finger Lakes</b>	<b>3.8</b>	<b>6.0</b>
<b>Capital</b>	<b>3.4</b>	<b>5.4</b>	Dutchess	3.5	5.8	Genesee	3.3	4.8
Albany	3.5	5.7	Orange	3.7	6.4	Livingston	3.7	4.6
Columbia	2.8	4.5	Putnam	3.6	5.6	Monroe	4.0	6.6
Greene	3.9	6.0	Rockland	3.5	6.5	Ontario	3.4	4.9
Rensselaer	3.5	5.2	Sullivan	3.5	6.6	Orleans	3.9	5.5
Saratoga	3.1	4.7	Ulster	3.5	5.6	Seneca	3.3	5.3
Schenectady	3.6	6.5	Westchester	3.7	7.0	Wayne	3.5	5.1
Warren	3.6	5.2	<b>Mohawk Valley</b>	<b>4.0</b>	<b>5.7</b>	Wyoming	3.3	4.4
Washington	3.4	4.7	Fulton	4.4	6.4	Yates	3.1	4.1
<b>Central New York</b>	<b>3.9</b>	<b>5.9</b>	Herkimer	3.9	5.2	<b>Western New York</b>	<b>4.0</b>	<b>6.5</b>
Cayuga	3.6	5.3	Montgomery	4.4	6.7	Allegany	4.5	5.3
Cortland	3.9	4.9	Oneida	3.9	5.8	Cattaraugus	4.3	5.9
Madison	3.9	4.9	Otsego	3.6	5.0	Chautauqua	4.2	6.2
Onondaga	3.7	6.3	Schoharie	3.8	4.7	Erie	3.9	6.7
Oswego	4.7	6.0	<b>North Country</b>	<b>4.3</b>	<b>5.0</b>	Niagara	4.2	6.6
<b>Southern Tier</b>	<b>3.9</b>	<b>5.3</b>	Clinton	3.8	4.9	<b>Long Island</b>	<b>3.4</b>	<b>6.4</b>
Broome	4.3	5.9	Essex	3.5	4.7	Nassau	3.4	6.6
Chemung	3.9	5.9	Franklin	4.1	5.1	Suffolk	3.4	6.2
Chenango	3.7	4.7	Hamilton	3.7	4.0	<b>New York City</b>	<b>3.5</b>	<b>13.9</b>
Delaware	4.0	4.8	Jefferson	4.7	5.4	Bronx	4.8	18.8
Schuyler	3.4	4.9	Lewis	4.1	4.5	Kings	3.6	14.1
Steuben	3.9	5.2	St. Lawrence	4.7	5.0	New York	3.1	10.9
Tioga	3.6	5.0				Queens	3.1	13.8
Tompkins	3.7	4.3				Richmond	3.4	11.6

### Technology and Fashion... from page 2

Retailers no longer need to keep a large inventory of clothing in their stores. Instead, brands can apply new AR and VR technologies to create digital experiences for customers. British clothing retailer Topshop has introduced AR mirrors into some of its stores. These allow customers to “try on” clothes without getting physically undressed. Similarly, Charlotte Tilbury, a cosmetics retailer, introduced a “magic mirror” that allows a customer to scan a facial image and then try on the brand’s makeup without physically wearing it. This type of technology dovetails with new social distancing guidelines that prevent customers from trying on clothes or sampling makeup products in stores.

This same technology can help brands give customers an “in-store” shopping experience while online. Several brands have started using AR to let online customers “try on” clothes before they place an order. For example, the shoe brand Converse has an app that lets customers see how any shoe from their catalog will look just by pointing their smartphone’s camera at their feet.

Online retail giant Amazon is also increasing its use of technology. In June 2020, the company announced its new AI tool, called Outfit-VITON. This technology is an image-based, virtual try-on system for apparel that allows users to see how specific garments will look on their actual bodies.

Virtual reality can create more of a hybrid experience, which combines aspects of in-person and online shopping. Virtual stores experienced a breakthrough as the pandemic reduced foot traffic at the mall. A company called Obsess utilizes proprietary VR technology to create high-definition virtual versions of retail stores that are accessible and shoppable from anywhere in the world. With this technology, customers still feel like they’re getting an in-person shopping experience, but from the comfort and safety of their own homes.

### Fashion, but Make it Virtual

A virtual dress, one that can only be “worn” digitally, sold for \$9,500 in 2019. Is this a sign of things to come? The market for goods that can only be accessed and traded in a virtual environment is now worth \$190 billion, according to market research firm CB Insights. New virtual-only fashion startups are touting “contactless,” “zero-waste” clothing.

And it’s not just startup companies jumping on this trend. Luxury brands are increasingly betting on virtual fashion and using it as an extension of their current marketing platform. World-renowned brands like Louis Vuitton, Gucci and Moschino have released entire lines specifically for video game avatars. Several brands, from Nike to Chanel, have paired up with Aglet, a location-based mobile application

game where users collect virtual shoes. Users can earn in-game currency to acquire virtual sneakers by taking steps or referring friends. Or they can use their real money.

### Conclusion

Technology has revamped the way we create and experience fashion. The global pandemic has helped to spur the technological revolution in fashion design, retail and marketing. The collaboration between AI and humans will diversify occupational roles within the fashion industry. Customers will reap the benefits of automation via new purchasing channels and a wider variety of items available for purchase. Stay tuned for future developments.

by Kylee Teague

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New York State Department of Labor  
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Building 12, State Office Campus  
Albany, NY 12240

Deputy Director/Editor	Kevin Jack
Director of Communications	Deanna Cohen
Graphic Design	Laura A. Campbell
Editorial Advisor	Jean Genovese



Regional Analysts' Corner

CAPITAL

Kevin Alexander — 518-242-8245

Over the past year, the number of private sector jobs in the Capital Region fell by 44,800, or 10.1%, to 398,600 in September 2020. Job declines were centered in leisure and hospitality (-17,900), trade, transportation and utilities (-8,300), educational and health services (-7,600), professional and business services (-4,000), manufacturing (-3,500), other services (-2,000) and natural resources, mining and construction (-1,200).

CENTRAL NY

Karen Knapik-Scalzo — 315-479-3391

Private sector jobs in the Syracuse metro area declined by 31,300, or 11.8%, to 232,900 in the 12-month period ending September 2020. Employment losses were greatest in trade, transportation and utilities (-9,000), professional and business services (-5,800), leisure and hospitality (-5,600), educational and health services (-5,100), manufacturing (-2,300) and natural resources, mining and construction (-1,500).

FINGER LAKES

Tammy Marino — 585-258-8870

The private sector job count in the Rochester metro area dropped by 49,200, or 10.7%, to 411,600 in the year ending September 2020. Job losses were largest in leisure and hospitality (-15,700), trade, transportation and utilities (-14,000), manufacturing (-7,200), educational and health services (-5,600), financial activities (-2,500), other services (-1,900) and professional and business services (-1,700).

HUDSON VALLEY

John Nelson — 914-997-8798

Over the past year, private sector jobs in the Hudson Valley decreased by 86,600, or 10.6%, to 727,200 in September 2020. Job losses were greatest in leisure and hospitality (-33,600), trade, transportation and utilities (-14,500), professional and business services (-10,600), educational and health services (-9,200), other services (-8,600) and natural resources, mining and construction (-5,100).

LONG ISLAND

Shital Patel — 516-934-8533

For the year ending September 2020, the number of private sector jobs on Long Island dropped by 113,000, or 9.8%, to 1,038,100. Losses were greatest in leisure and hospitality (-37,600), educational and health services (-23,600), trade, transportation and utilities (-19,700), professional and business services (-11,600), manufacturing (-7,300) and natural resources, mining and construction (-6,600).

MOHAWK VALLEY

Brion Acton — 315-793-2282

Private sector jobs in the Mohawk Valley fell by 14,900, or 10.1%, to 132,900 over the year ending September 2020. Job gains were focused in financial activities (+300). Employment losses were largest in educational and health services (-4,500), leisure and hospitality (-3,800), trade, transportation and utilities (-2,400), manufacturing (-1,500) and professional and business services (-1,200).

NEW YORK CITY

Elena Volovelsky — 718-613-3971

Private sector jobs in New York City declined over the year by 583,800, or 14.4%, to 3,478,800 in September 2020. Job losses were greatest in leisure and hospitality (-225,800), professional and business services (-98,500), trade, transportation and utilities (-93,600), educational and health services (-71,200), other services (-29,500), financial activities (-25,300) and natural resources, mining and construction (-19,500).

SOUTHERN TIER

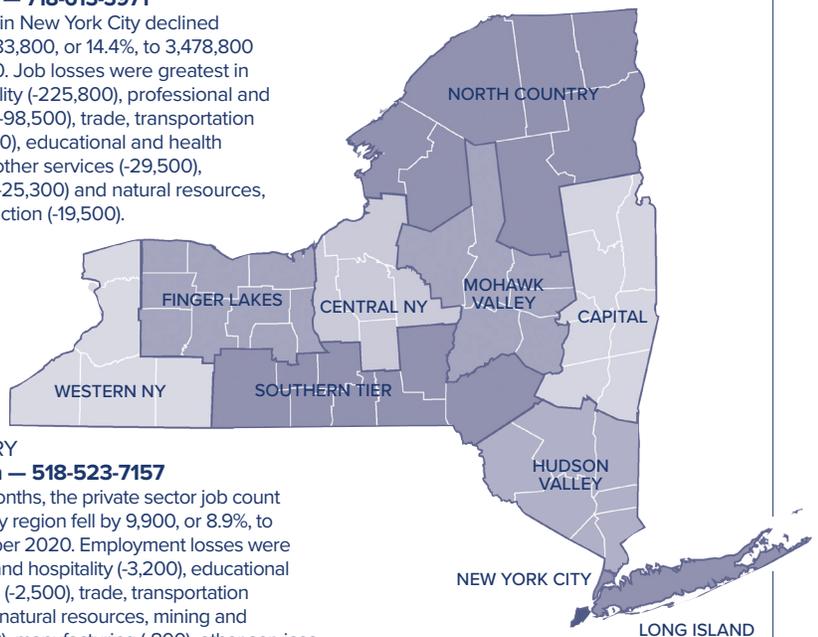
Christian Harris — 607-741-4480

For the 12-month period ending September 2020, the private sector job count in the Southern Tier declined by 14,500, or 6.4%, to 210,700. Employment losses were greatest in leisure and hospitality (-3,600), educational and health services (-3,000), trade, transportation and utilities (-2,500), professional and business services (-1,700), natural resources, mining and construction (-1,500), other services (-1,100) and manufacturing (-700).

WESTERN NY

Timothy Glass — 716-851-2742

Over the past year, the number of private sector jobs in the Buffalo-Niagara Falls metro area dropped by 46,000, or 9.6%, to 431,300 in September 2020. Losses were greatest in leisure and hospitality (-15,100), trade, transportation and utilities (-11,200), educational and health services (-7,600), professional and business services (-5,800), other services (-2,400), financial activities (-1,300) and manufacturing (-1,200).



NORTH COUNTRY

Anthony Hayden — 518-523-7157

Over the past 12 months, the private sector job count in the North Country region fell by 9,900, or 8.9%, to 101,800 in September 2020. Employment losses were greatest in leisure and hospitality (-3,200), educational and health services (-2,500), trade, transportation and utilities (-1,100), natural resources, mining and construction (-1,000), manufacturing (-800), other services (-700) and professional and business services (-600).