

With the start of the fall semester, dozens of students embarked on graduate-level academic programs in data science at NJIT's new location, just steps from the Exchange Place PATH station in the Waterfront district of Jersey City.





NJIT@JerseyCity is located at 101 Hudson Street on the Jersey City waterfront and, in addition to an ultra-modern learning environment, also provides an expansive view of the iconic Manhattan skyline.

NJIT's Ying Wu College of Computing (YWCC) offers a master's degree in Data Science as well as graduate certificates in Big Data and Data Mining at NJIT@JerseyCity. YWCC plans to add a graduate certificate in Data Visualization in spring 2020 and further expand next fall to include Cyber Security graduate programs. Non-credit data science accelerator programs will begin later this year.

Jersey City was chosen for NJIT's new location because of the strong demand for data scientists in the area. Most of the graduate students at NJIT@JerseyCity are working professionals attending the programs in the evenings, hailing from companies and organizations such as Microsoft, IBM, Bank of America, JPMorgan Chase, Prudential, BNY Mellon, TD Ameritrade, NJ Transit, Con Edison and City National Bank.

Roberto Rivera, a business major working as a market research professional for New Jersey Transit, said he's excited about the new program at NJIT@JerseyCity. "I do a lot of market analysis on the NJ Transit data

using traditional tools. I will be pursuing the Certificate in Data Mining to enhance my skillset and match the recent initiative of NJ Transit, investing in technology that makes our business smarter, faster and better. I am fortunate to have the strong support of my managers in this endeavor. They value a combination of quality education with practical skills."

"My employer collects an enormous quantity of data from its customers on a daily basis, and we are constantly looking for ways to put it to good use and improve our service," added Evo Yaset, an electrical engineer and student at NJIT@Jersey City. Earning an M.S. in Data Science is a unique opportunity for me to obtain the skills I need to do precisely that. On top of that, the location is very convenient, since I live in Jersey City."

GENERATING TECH TALENT

For a number of years, data scientist has ranked as one of the top jobs in the U.S. in terms of salary and market. "The demand is especially significant in the fast-growing New York/New Jersey metropolitan area, and this has been reflected in the incredible interest we have witnessed in our Jersey City

ABOVE: NJIT students showed support for the launch of NJIT@JerseyCity and raised awareness of the new location by volunteering to spread the word at events such as Project: EATS, a summertime festival in Jersey City.

programs. It is our duty and our privilege to generate the tech talent to meet this demand," said YWCC Dean Craig Gotsman.

In practice, not all technical professionals working with data perform the same job and there is a need for a variety of different skills. NJIT@JerseyCity offers multiple programs to meet the variety of skills needed.

The certificate in Data Mining is designed for data analysts, professionals who work with large data sets with a focus on data access, reporting, basic analysis and visualization.

The certificate in Big Data Essentials is for the data engineers, professionals responsible for managing the infrastructure for big data storage, rapid access and pipeline processing of large data sets and preparing the data for analysis.

The most comprehensive program is the M.S. in Data Science. That program is for those who want to pursue careers as data



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- Tim Sullivan, CEO of New Jersey's Economic Development Authority (NJEDA)

scientists, who create and apply machine learning models and predictive methods to large data sets to extract actionable and valuable information.

One bonus for those pursuing one of the certificate programs is that they can "upgrade" their education down the road and apply certificate courses taken toward an M.S. in Data Science.

CUTTING-EDGE INTERDISCIPLINARY RESEARCH

Distinguished Professor David Bader leads the faculty at the Jersey City location. He also is the director of NJIT's new Institute for Data Science. The Institute focuses on cutting-edge interdisciplinary research and development in all areas pertinent to digital data.

Bader teaches the Intro to Big Data course at NJIT@JerseyCity and is joined by Pantelis Monogioudis, who teaches Data Mining. In addition to his work at NJIT, Monogioudis is also head of Applied Machine Learning Research at Nokia Bell Labs.

Andrew Pole, of NJIT's department of Mathematical Sciences, teaches Applied Statistics and Keith Williams of YWCC's Department of Informatics, teaches Web Systems Development. Williams is a seasoned software development professional, with many years of instructional and entrepreneurial hands-on experience in the field.

Students at NJIT@JerseyCity will develop a deep knowledge of modern computer science and be active participants in projects involving artificial intelligence, big data, analytics, data mining, visualization and machine learning.

Beyond the academic degree programs, NJIT@JerseyCity will offer non-credit Data Science Accelerator programs later this fall. In contrast to the typical boot camps offered by others, these intense, deep-tech five-week programs are designed for working

professionals who want to hone their data science skills in a fast-changing marketplace.

The expansion to Jersey City enables NJIT's Ying Wu College of Computing to continue growing its reputation as the largest producer of computing talent in the New Jersey/New York metro region, enrolling more than 3,000 students and graduating more than 800 computing professionals each year. NJIT has been recognized as a Top 100 National University, by *U.S News & World Report*, is rated by *Forbes* as #1 nationally for student upward economic mobility and ranks in the Top 2% Nationwide in Payscale.com's College Salary Report.

Tim Sullivan, CEO of New Jersey's Economic Development Authority (NJEDA), said "Reclaiming New Jersey's position as the State of Innovation through targeted investments in students and workers is a pillar of Governor Murphy's plan for a stronger and fairer New Jersey economy. NJIT's expansion to Jersey City will create new opportunities for New Jerseyans and make our already highly educated workforce even more attractive to employers and entrepreneurs."

For more information on all NJIT@JerseyCity programs, please visit jerseycity.njit.edu.

Author: Brian Malina is the Director of Communications and Marketing at NJIT's Ying Wu College of Computing.

