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Founded in 1881, New Jersey Institute of Technology (NJIT) is **New Jersey's public, technological research university**. NJIT is located in Newark, New Jersey, in easy driving distance of four major research universities Princeton, Columbia University, New York University (NYU), and Rutgers with which it maintains collaborations. **NJIT is a R1 university by the Carnegie Classification indicating "very high research activity."** NJIT is recognized by U.S. News & World Report as a top-tier national research university. Northern New Jersey is one of the nation's technology nerve centers, with research labs of Siemens, NEC, SRI International, Nokia Bell Labs, SAP/Hasso Plattner Institute, etc. in easy reach.



In recent years, NJIT has expanded to 27 buildings. In November 2017, the 220,000-square-foot Wellness and Events Center was added. NJIT offers 92 undergraduate and graduate degree programs in six specialized schools: Newark College of Engineering, College of Architecture and Design, College of Science and Liberal Arts, School of Management, Albert Dorman Honors College, and the Ying Wu College of Computing Sciences. Students are instructed by expert faculty, 98 percent of whom hold the highest degree in their field with the student-to-faculty ratio 13 to 1. The academic programs of NJIT are fully accredited by the appropriate accrediting boards, commissions and associations such as Middle States, Accreditation Board for Engineering and Technology (ABET), and National Architectural Accrediting Board (NAAB).

About the Ying Wu College of Computing: NJIT established the Ying Wu College of Computing in 2001, reflecting its desire to make computing a centerpiece of its vision for the 21st century. Our mission is to teach a broad range of computing disciplines to students on campus and at a distance, to carry out cutting-edge computing research, and to work closely with industry. We also support faculty and student innovation and collaborate closely with the local entrepreneurial eco-system, including the one growing in leaps and bounds in neighboring New York City.

We aim for a broad impact inside and outside the campus. As the only college of its kind in New Jersey, and one of the few in the US, the Ying Wu College of Computing builds on three decades of experience in computing education and research. Our faculty are engaged in cutting-edge research in areas ranging from networking and cyber security to big data analytics, bioinformatics, medical informatics, computer vision, multi-media data management, risk assessment, optimization, gaming, virtual reality, etc. We are the largest computing program in the region, yet our classes remain small, averaging about 30 students.

Recently, NJIT made a strategic investment in data science. In July 2019, NJIT announced the establishment of the **Institute for Data Science** with inaugural director David A. Bader. The Institute for Data Science initiates collaborative inter-disciplinary research by bringing existing research centers in big data, medical informatics and cybersecurity together with new research centers in financial data science and in machine learning and artificial intelligence, cutting across all NJIT colleges and schools to conduct both basic and applied research. The Institute for Data Science is aligned under the Senior Vice Provost for Research, whose office supports the institute's administration and activities. Approximately 35 faculty members from the Ying Wu College of Computing, Newark College of Engineering, College of Science and Liberal Arts, and Martin Tuchman School of Management, are affiliated with the institute.

In Fall 2019, NJIT opened a data science focused satellite campus ("[NJIT@JerseyCity](#)") adjacent to Exchange Place in Jersey City, NJ, in the heart of the financial services district, and ten minutes from lower Manhattan via the PATH train. The flagship offering is a full five-semester part-time M.S. program for data scientists. This M.S. in Data Science covers basic and advanced methods in statistical inference, machine learning, data visualization, data mining, and big data, all of which are essential skills for a high-performing data scientist. To be admitted to the program, we require a basic background in Mathematics (calculus, linear algebra), Statistics (probability and basic stats) and Software Development (programming, data structures and algorithms). This part-time degree program involves 10 courses of 3 credits each, taught over 5 semesters of 15 weeks each (including summer). Courses consist of formal lectures as well as hands-on programming projects. The program curriculum uses the Python programming language with its data science libraries and features tools like R for statistical analysis and Tableau for data visualization. Students work on homework assignments and projects covering both theory and applications on real data with guidance from the professor and teaching assistants.

In addition, NJIT@JerseyCity offers two-semester graduate Certificate programs for data analysts (called "Data Mining" or "Data Visualization") and a two-semester graduate Certificate program for data engineers (called "Essentials of Big Data"). The programs are designed so that qualified holders of a Certificate can "upgrade" their education by continuing to the MS program, while receiving full credit for their Certificate coursework. All programs are part-time, designed for the convenience of working professionals looking to expand their expertise and enhance their career options. Each academic course bears 3 credits, taught over a 15-week semester at a single weekly session of 3 hours (typically 6pm-9pm). The courses also involve homework assignments, a midterm exam, and a final exam.

NJIT@JerseyCity also offers a series of 5-week non-credit accelerators which are more intense (3 hours daily, Mon-Fri), addressing the same topics as the credit-bearing programs. All accelerator coursework is conducted in the classroom, as opposed to the degree programs which require significant work outside the classroom.

As a thought leader in data science education, NJIT has developed one of the nation's first B.S. Data Science undergraduate degree programs, and plans its launch in the 2021-2022 academic year with faculty from the Ying Wu College of Computing and the Department of Mathematical Sciences.

Highlights of recent faculty awards in NJIT's Institute for Data Science include: NSF CAREER (Senjuti Basu Roy, 2020), NVIDIA AI Lab (Bader, 2019), Facebook Research AI Hardware/Software Co-Design award (Bader, 2019), IARPA HECTOR (Kurt Rohloff, 2019), NSF SaTC (Reza Curtmola, 2018), NSF MRI (Chase Wu, 2018), and DARPA Young Faculty Award (Kurt Rohloff, 2017).