

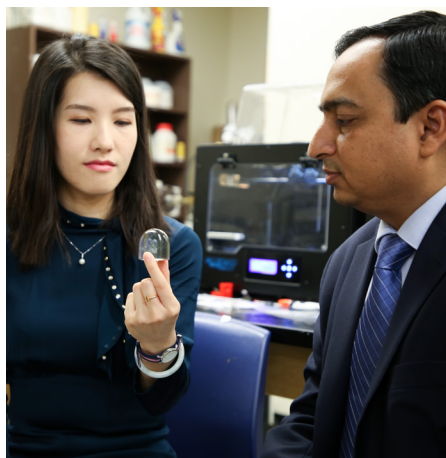
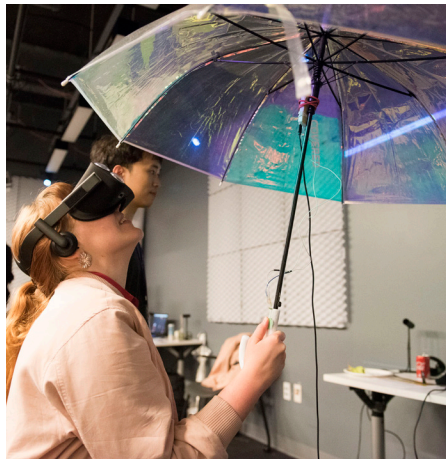
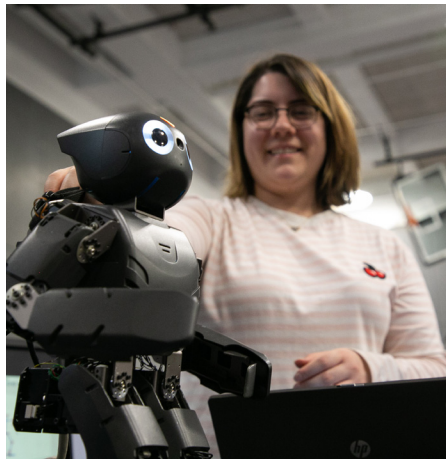


Our Areas of Research Excellence

NYU Tandon is engineering creative and smart, connected and secure, sustainable and healthy urban and global communities. We're doing so by focusing on fields in vital research areas and the intersections between them. That focus allows us to build upon our rich history, chart a path to a better future for the entire planet, and prove you can be born anywhere but made right here in Brooklyn.

Communications/IT

We're doing research that's making the next era of communications and connection possible, from paving the way for 5G and 6G mobile to broadening access to help bridge the digital divide. And thanks to work being done at NYU WIRELESS and throughout our departments, it's not hyperbole to suggest that reality might soon include drones using computer vision and cloud-based AI to identify and avoid obstacles, ultra-fast communications between vehicles to avoid collisions, teams of robots "talking" to each other to perform complex tasks, physicians doing surgery remotely and wirelessly, and AR/VR experiences delivered to your mobile screens and smart glasses.



Cybersecurity

From improving the transparency of online political advertising and combating the sale of counterfeit goods on the Internet to making sure that the software used in automobiles is impervious to hacking and that the computer-chip supply chain is free of piracy, NYU Tandon cybersecurity experts are working on it. With every aspect of our lives now affected by online systems, we're finding the keys to keeping personal data private, power grids impregnable, national defense infrastructure safe from malefactors, and much more.

Data Science/ AI/Robotics

At NYU Tandon, we're making enormous inroads in the growing fields of AI and robotics, creating drones controlled with a simple gaze, making it easier for surgeons to perform delicate operations, developing algorithms that make financial investing more secure, and other such improvements.

Our AI experts and roboticists are working in concert with our data scientists, who are discovering new ways to analyze, visualize, and use the 2.5 quintillion bytes of data the world generates each and every day in the form of GPS signals, shopping transactions, taxi rides, social media posts, online videos, and digital photos, among other sources.

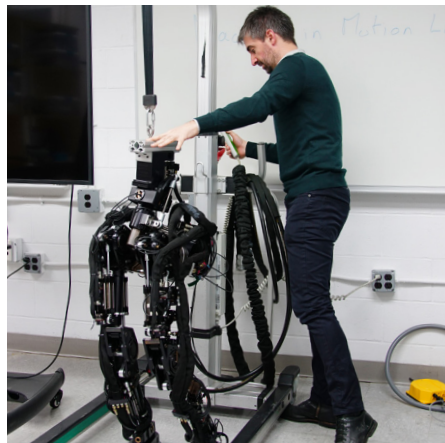
It's a collaborative ecosystem with a single goal: to harness the collective power of data, machine learning techniques, and autonomous systems to address the issues facing the world.

Emerging Media

At NYU Tandon we view emerging media as a means to help translate and create new forms of interaction, enabling everyone, regardless of ability, to share in news, storytelling, and communication. Through various initiatives — including our Integrated Digital Media program, a STEAM engine that drives creative practice, experimentation, media design, and engineering — we are ensuring that our students and faculty are always cutting the edge on new forms of interface. Projects include using motion-capture technology to reimagine theatrical performance; harnessing AR/VR to radically change the way people engage with information and one another; and helping NASA develop next-generation user interfaces for space exploration. We are constantly modifying industry-standard technologies and creating new ones, and we're doing it across multiple sectors including media and entertainment, health, training and education, tourism, commerce and retail, engineering and design, architecture and construction, and civic technology and smart cities.

Sustainability

The world is facing serious challenges due to global warming and other environmental threats; with sea levels rising and natural habitats being destroyed, scientists must find ways to meet the needs of the Earth's current inhabitants without compromising the well-being of future generations. NYU Tandon researchers are addressing the complex issues involved — exploring renewable fuel sources, helping reduce carbon emissions, making our power grids more efficient, and finding innovative ways of keeping the world's ecosystems in balance.



Urban

With more than half of the world's population now residing in urban areas and that figure expected to rise to more than 70% by mid-century, NYU Tandon is innovating ways to make the cities of the future smart and resilient. Whether it's designing earthquake-resistant buildings, advancing autonomous vehicles to revolutionize commuting, developing cutting-edge processes to disinfect wastewater, using virtual and augmented reality to create human-friendly spaces, maximizing the efficiency and safety of the construction industry, or myriad other vital components of urban environments, As a part of NYU, a university with a global presence, Tandon researchers have the entirety of NYC and the world as a living lab

Health

Tandon researchers work at the intersection of engineering, healthcare, and the life sciences to discover powerful new treatments and medical devices, develop methods to deliver care to underserved communities, create assistive technology to increase accessibility and livability for all, and find ways to make the world's population a healthier one. From engineering proteins to treat disease to creating nano-scale "labs-on-a-chip" and biosensors, we're partnering with clinicians to save lives and open up new frontiers in healthcare.