Emerging Media

At NYU Tandon, we're exploring and developing new modes of communication that are impacting not only the worlds of art and entertainment but education, business, and healthcare. New York is the heart of the media universe, and NYU Tandon has its finger on the pulse.

Integrated Digital Media

NYU Tandon's IDM program is a STEAM engine, driving creative practice, experimentation, media design, and engineering. Our projects include using motion capture technology to re-imagine theatrical performance; harnessing AR/VR to radically change the way people engage with information, entertainment, the environment, and one another; creating citizen science tools to empower New York City residents; 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 with deep technical expertise, across multiple sectors including media and entertainment, health, training and education, tourism, commerce and retail, engineering and design, architecture and construction, civic technology and smart cities.

The Online Transparency Project

Social media's oversized role in shaping the 2016 election prompted Computer Science and Engineering Assistant Professor Damon McCoy's research team to turn their advanced data scraping and AI skills to the problem on a worldwide scale. Already, their Online Transparency Project has revealed insight into the opaque (and sometimes nefarious) world of political advertising in both the United States and Canada, with more countries to come.

Their regularly updated analyses of Facebook, Google, and Twitter online advertising is becoming a staple for investigative reporters and the public, offering insights that are otherwise unavailable from the new-media giants.

The RLab at the Brooklyn Navy Yard

The RLab

The RLab is the nation's first city-funded center for research, entrepreneurship, and education in virtual and augmented reality and related technologies. Administered by NYU Tandon with a participating consortium of New York City universities, the RLab is located in Building 22 of the Brooklyn Navy Yard and cements New York City's status as a global leader in VR/AR, which is expected be a $215 billion per year market by 2021.

The annual IDM showcase shows off the work and projects of IDM students

NYC Media Lab

NYC Media Lab connects media and technology companies like Hearst, Bloomberg, and NBC with NYU Tandon and other area universities to drive innovation, entrepreneurship, and talent development. A public-private partnership launched by the New York City Economic Development Corporation, NYC Media Lab funds projects and programs that foster collaboration across an array of disciplines and emerging technologies. The Combine, the Lab's venture platform, helps companies connect to startups within the City's thriving technology ecosystem.

Using VR to peer inside buildings (and emotions)

We spend 90% of our time indoors, so our quality of life depends on the spaces in which we live and work. Since 2016, Semiha Ergan, an assistant professor of civil and urban engineering and recipient of a prestigious DARPA Young Faculty Award, has been sending people into virtual reality (VR) architectural spaces with psychometric gear to measure their physiological, cognitive, and emotional responses to built spaces. The research was just tapped as "Editor's Choice" in the American Society of Civil Engineers Journal of Computing in Civil Engineering.

Ergan's research quantifies human experience in architectural spaces by fusing VR gear with noninvasive body area sensor networks to tap into skin conductance, brain activity, heart rate, and other metrics while subjects navigate and perform tasks in virtual environments.

When art and tech intersect

Can 21st-century data science and visualization revolutionize the impact of art created millennia ago? Experts at NYU Tandon's Visualization and Data Analytics (ViDA) research center and art historians at The Frick Collection, one of New York's most prestigious cultural institutions, collaborated to create ARIES, an intuitive web-based software platform that simplifies the exploration, analysis, and organization of digital collections by allowing experts to easily manipulate images. While it is designed for art historians, curators and conservators, it can be used by editors, photographers, and even, potentially, physicians — anyone whose work involves manipulating and comparing images.

5G COVET: Virtual reality, real learning

Deep expertise in K-12 STEM education collides with groundbreaking research in wireless technology at NYU Tandon to deliver a potential killer app for teaching: 5G COVET.

Employing the popular escape room game format, students don virtual reality goggles to solve math problems aligned with their middle school curriculum, moving through a holographic home setting as they conquer each problem.

Public school teachers who helped develop 5G COVET report that even disengaged students became fascinated with solving STEM challenges, and the development team, led by Electrical and Computer Research Assistant Professor Thanasis Korakis, is creating a platform adaptable to a wide range of age groups and STEM subjects.

Making computer interaction effective and meaningful

Professor of Technology Management and Innovation Oded Nov is discovering new modes of human-computer interaction. His research previously demonstrated how meaningful packaging and presentation of data can lead to wiser financial planning decisions and better understanding of personal genomic data.

Now, working under a $2 million NSF grant, he's leading a team that shines a light on the opaque artificial intelligence tools used by medical personnel. The goals: to encourage more effective use of healthcare technologies, more efficient use of human capabilities in restructured healthcare occupations, and a healthier and better-informed population. In an increasingly complex online world, Nov is dedicated to making it easier to allocate our time and attention in optimal ways.

Sniffing out email scams

With email fraud on the rise, a team of NYU Tandon researchers led by Associate Professor of Computer Science and Engineering Enrico Bertini is helping law enforcement crack down on scammers, thanks to a new visual analytics tool that dramatically speeds up forensic investigations and highlights critical links within data. Dubbed Beagle – a play on the sharp search skills of canines used to sniff out evidence – the new tool features an interface that can return queries as well as summarize emails and highlight commonalities between them, even in fields investigators might otherwise overlook — such as the time an email is sent, the geographical location of victims, and keywords and content patterns.

OpenSpace lets visitors to a planetarium or anyone with a laptop visit the planets.

Visualizing the known universe

A voyage to space doesn't always require a ride in a rocket. The OpenSpace Project, a NASA-funded open-source collaboration, lets visitors to a planetarium or anyone with a laptop visit the planets, travel to the far reaches of the solar system, and venture to the ends of the universe. The immersive visualization platform, whose developers include Claudio Silva, a professor of computer science and engineering, and Jonathas Campi Costa, a research associate at NYU Tandon's Visualization and Data Analytics Center (ViDA), creates opportunity for shared simultaneous experiences among audiences worldwide.