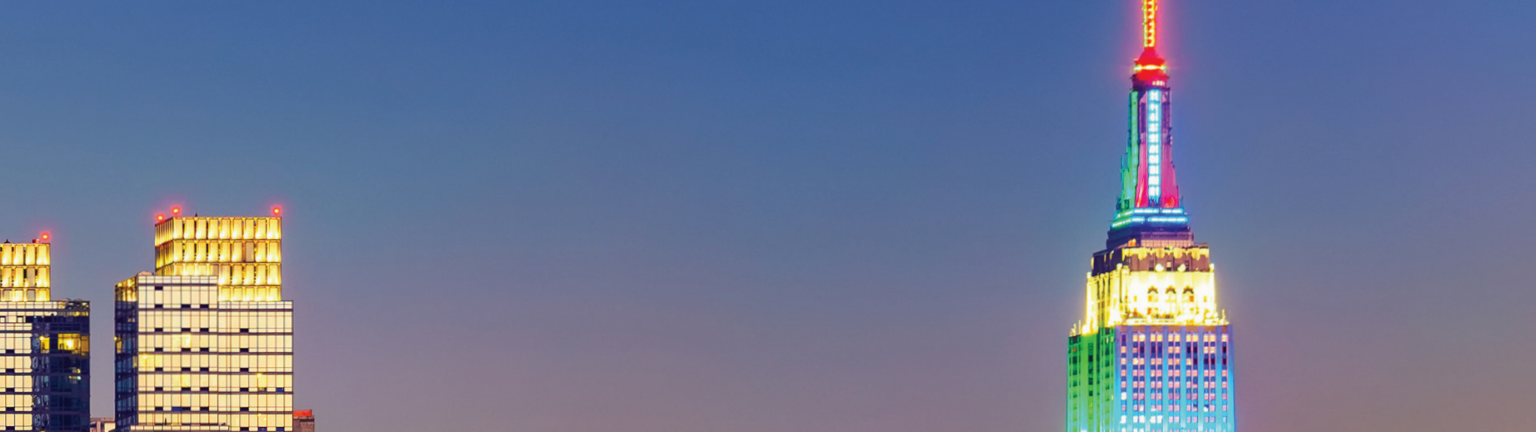YESHIVA UNIVERSITY

KATZ SCHOOL OF SCIENCE AND HEALTH
NEW YORK CITY

MAKING THE WORLD SMARTER,
SAFER AND HEALTHIER

Katz
**Katz School
of Science and Health**

#65 in the United States by *QS Rankings*

#3 in New York City by *QS Rankings*

#46 Best Value in the United States by *U.S. News & World Report*

#1 Best Value in New York City by *U.S. News & World Report*

95% employment rate

THE KATZ SCHOOL
OF SCIENCE AND HEALTH

The Katz School is Yeshiva University's flagship school for STEM and Health. We focus on industry sectors that are central to the modern economy: Artificial Intelligence, Biotechnology, Computer Science, Cybersecurity, Data Analytics, Digital Media, and Fintech as well as Nursing, Occupational Therapy, Physician Assistant Studies and Speech-Language Pathology.

Founded in 1886, Yeshiva University (YU) is a premier research university in New York City. YU serves over 5,500 students across three undergraduate schools and seven graduate schools, including the Katz School of Science and Health, Cardozo School of Law, the Wurzweiler School of Social Work, the Ferkauf Graduate School of Psychology, and renowned affiliates such as the Albert Einstein College of Medicine.

Just two blocks from the Empire State Building, the Katz School is located in the heart of Manhattan. Study and practice next to the best and biggest companies in one of the largest and most dynamic job markets in the world.

NEW YORK CITY IS OUR CAMPUS

Paul Russo, Ph.D.
University Vice Provost and Dean, Katz School of Science and Health

"We are research scientists, tech builders and patient-centered clinicians working on problems that matter. We concentrate our energy on industries that are redefining the economy. In the lab, classroom, and clinic, we lead with kindness, integrity, generosity and a commitment to making the world smarter, safer and healthier."

Sayanto Pal (India)
M.S. in Biotechnology Management and Entrepreneurship

"As an international student from Mumbai, India, I relocated to New York City for graduate studies because of the boundless opportunities it offers. My time at the Katz School has been nothing short of life-changing."
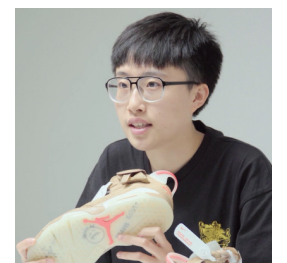
Jingyuan Wang (China)
M.S. in Digital Marketing and Media

"Out of the many prestigious universities in New York City, I chose the Katz School for my graduate studies, to learn more about the media industry and to pursue my dreams. As a Katz School student, you are free to develop your talents and ideas to their fullest extent."

GRADUATE DEGREES

FOR THE MOST IN-DEMAND CAREERS

We take an interdisciplinary approach to research and education, fostering the creativity, collaborative thinking and builder mindset required to take on today's toughest problems. Learn the skills employers want and prepare for a lifetime of professional success.

STEM PROGRAMS

M.S. in Artificial Intelligence

36 Credits | Fall and Spring Starts

Average time to completion:
1.5–2 years

Sample Courses:
Data Acquisition and Management, Numerical Methods, Predictive Models, Machine Learning, Artificial Intelligence, Neural Networks and Deep Learning

Future Job Titles:
Data Scientist, Machine Learning Engineer, Software Engineer, Solutions Architect, Artificial Intelligence Engineer, Data Engineer, Cloud Solutions Architect/Engineer, Software Developer

Median Salary: $156,000

### M.S. in Biotechnology Management and Entrepreneurship

36 Credits | Fall and Spring Starts

Average time to completion:
1.5–2 years

Sample Courses:
Biostatistics and Informatics, Pharmacology Product Development and Commercialization, Intellectual Property, Regulation and Compliance for Biotech

Future Job Titles:
Director of Business Development, Product Manager, Project Manager, Clinical Trial Manager, Life Science Consultant, Marketing Product Manager, Commercialization Manager

Median Salary: $99,000
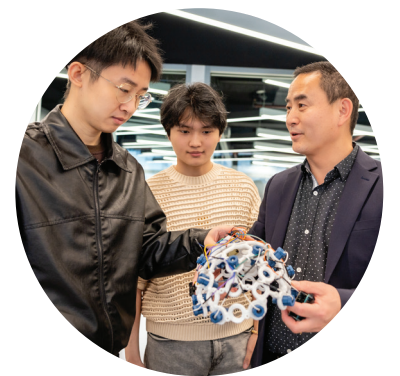
M.S. in Computer Science

30 Credits | Fall and Spring Starts

For students with an undergraduate computer science degree.

Average time to completion:
1–1.5 years

M.S. in Computer Science—Agile

45 Credits | Fall and Spring Starts

For students without an undergraduate computer science degree.

Average time to completion:
2 years

Sample Courses:
Advanced Algorithms, Theoretical Computer Science, Emerging Paradigms in Programming, Fundamentals of Software Engineering, Mobile Computing and Apps Development, Human-Computer Interaction, Artificial Intelligence, Machine Learning

Future Job Titles: Computer and Information Research Scientist, Software Developer, Computer Network Architect, Computer Systems Analyst, Database Administrator

Median Salary: $125,000

STEM PROGRAMS

M.S. in Cybersecurity

30 Credits | Fall and Spring Starts

Average time to completion:
1−1.5 years

Sample Courses:
Architecture of Secure Operating Systems; Applications and Devices; Network, Data and Communications Security; Cloud Security; E-Discovery, Digital Evidence and Computer Forensics

Future Job Titles:
Cybersecurity Analyst, Cybersecurity Engineer, Information Security Analyst, Information Security Engineer, Security Engineer, Systems Engineer, Information Systems Security Officer, Cybersecurity Architect

Median Salary: $138,000

**Ranked #2
Best Online Master's
in Cybersecurity
in the U.S. by
Fortune Magazine,
2022.**

M.S. in Data Analytics and Visualization

30 Credits | Fall and Spring Starts

Average time to completion:
1−1.5 years

Sample Courses:
Business Modeling, Structured Data Management, Visual Design and Storytelling, Computational Math and Statistics, Analytics Programming, AI Product Studio

Future Job Titles:
Data Scientist, Data Analyst, Data Engineer, Software Engineer, Analytics Manager, Business Intelligence Analyst

Median Salary: $175,000

M.S. in Digital Marketing and Media

30 Credits | Fall and Spring Starts

Average time to completion:
1−1.5 years

Two Tracks:
Digital and Social Strategies Track; Marketing Analytics Track

Sample Courses:
Consumer Behavior and Customer Relationships, Brand Management, Visual Design and Storytelling, Analytics Programming, Web Analytics and SEO

Future Job Titles:
Digital Media Buyer, Global Marketing Director, Digital Marketing & Analytics Manager, Demand Generation Manager, Digital Experience Manager, Social Media & Email Marketing Manager

Median Salary: $134,000

M.A. in Physics

30 Credits | Fall and Spring Starts

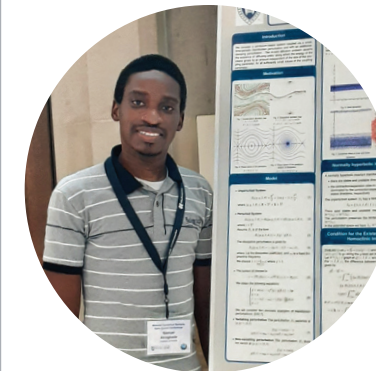**Average time to completion:**
1−1.5 years

Solve problems in quantum information, mechanical and electronic materials behavior, propagation of waves, biological matter, dynamics, and hardware and software development.

Sample Courses:
Engineering Mechanics, Quantum Engineering, Applied Statistical Thermodynamics

Future Job Title: Physicist

Median Salary: $122,850

M.A. in Mathematics

30 Credits | Fall and Spring Starts

Average time to completion:
1−1.5 years

Ph.D. in Mathematical Sciences

66 Credits (36 credits above a master's degree)

Average time to completion:
3−5 years

Gain a solid foundation in advanced mathematics and develop skills in mathematical modeling, numerical applications and data analysis. Work with research-active faculty and industry mentors to solve real-world problems.

Sample Courses:
Mathematical Statistics, Mathematics of Finance, Dynamical Systems, Time Series Analysis

Future Job Title: Mathematician

Median Salary: $90,410

HEALTH SCIENCE PROGRAMS

M.S. in Physician Assistant Studies

86 Credits | Fall Start

Average time to completion:
28 months

The M.S. in Physician Assistant Studies is an evidence-based medical science program. Students master diagnostic and patient-care skills in top-tier physical diagnosis and clinical skills laboratories, and rotate through clinical disciplines in areas like primary care, internal medicine, general surgery, emergency medicine, women's health, pediatrics and behavioral health, throughout the New York area.

Future Job Titles:
Physician Assistant, Physician Assistant Educator, PA Administrator

Median Salary: $130,000

M.S. in Speech-Language Pathology

55 Credits | Fall Start

Average time to completion:
5 semesters

One of the few SLP programs in the country specializing in the medical aspects of speech-language pathology, our master's program takes a multidisciplinary approach to diagnosing and treating speech, language, swallowing and communication cases across the lifespan. Offered online and on-campus, the program prepares students to apply for certification from the American Speech-Language Hearing Association (ASHA) and New York State licensure.

Future Job Titles:
Speech-Language Pathologist (SLP), Speech Language Therapist, School Speech Language Pathologist

Median Salary: $99,000

Occupational Therapy Doctorate

115 Credits | Fall Start

Average time to completion:
3 years

The entry-level Occupational Therapy Doctorate prepares students for a lifetime of helping people. Through a student-practitioner approach, students work alongside faculty and learn to translate research into evidence-based interventions, new diagnostics and protocols. Students practice in state-of-the-art labs and complete fieldwork in competitive placements throughout New York City and beyond.

Future Job Titles:
Assistive Technology Consultant, OT Consultant, OT Practice Owner, Hospital OT, Independent OT, Skilled Nursing Facility OT

Median Salary: $94,000

NURSING PROGRAMS

Accelerated B.S. in Nursing

62 Credits | Fall Start

Average time to completion:
16 months

Designed for student who already hold a non-nursing bachelor's degree, the Katz School's accelerated B.S. in Nursing prepares highly trained, culturally competent registered professional nurses to provide evidence-based, patient-centered healthcare for people of all ages. In 16 months, students build a solid foundation in nursing theory and concepts; master patient-care skills in top-tier health assessment, clinical skills and advanced clinical simulation laboratories; and complete clinical experiences during medical surgical, pediatric, maternity, psychiatric and community nursing clinical rotations. Graduates are prepared to take the National Council Licensure Examination-Registered Nurse (NCLEX-RN).

Future Job Title:
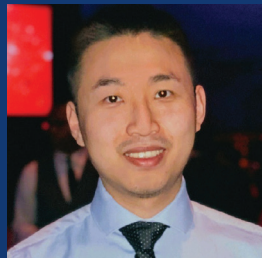Registered Nurse

Median Salary: $100,000–110,000

Source for salary information: EMS

RESEARCH WITH IMPACT

Natania Birnbaum (U.S.)
M.S. in Biotechnology Management and Entrepreneurship

Ke Chen (China)
M.S. in Data Analytics and Visualization

Ziyang Guo (China)
M.S. in Data Analytics and Visualization

A Wearable Device to Help Stroke Survivors Regain Upper Limb Mobility

Natania Birnbaum and Amena Farooq (M.S. in Biotechnology Mangement and Entrepreneurship) are working with Ke Chen and Ziyang Guo (M.S. in Data Analytics and Visualization) as part of an interdisciplinary team led by Dr. Sai Praveen Kadiyala, postdoctoral fellow in artificial intelligence, to develop a myoelectric exoskeleton—a robotic hand—to support upper-limb rehabilitation for stroke survivors.

Although stroke survivors may not be able to move their muscles, they still produce weak electrical signals that surface electromyography (sEMG) sensors can detect through micro-voltages generated through the skin. The team is building a prototype of a hand exoskeleton that can take sEMG signals from the muscles of the arm and use them to move the fingers of the exoskeleton. Their aim is to create a computational model of different hand gestures and complex grasps that can be used for upper-limb rehabilitation.

Robot-assisted therapies hold promise because they are convenient and cost-effective for the patient and therapist, make data collection from the treatment much easier and increase patient motivation. The advantages of a sEMG-based approach include adaptation to the patient's own body movements and the potential for a more lightweight, flexible and comfortable robot.

Samuel Akingbade (Nigeria)
Ph.D. in Mathematical Sciences

Mathematics Student Modeling an Unusual Kind of Natural Energy

Samuel Akingbade is researching the mathematical possibility of continuously capturing energy derived from small amounts of vibration in human and natural activity.

Energy harvesting devices, consisting of systems of oscillating beams in skyscrapers, trains and bridges, are made up of piezoelectric materials, which produce an electric charge under mechanical stress. When an internal perturbation or friction is added to the system, the energy produced is not conserved and may evolve randomly or even decay. Akingbade's model will try to determine the right amount of external force on these beams to overcome the effects of internal friction, which stops the beams from oscillating. The resulting surplus of energy could then be captured and stored.

Akingbade, whose work is supported by an NSF grant awarded to mathematics professors Marian Gidea, Edward Belbruno and Pablo Roldan, presented his research at the 2022 Houston Workshop on Hyperbolic Dynamical Systems and in a poster session at the Midwest Dynamical Systems Early Career Conference at the University of Notre Dame. Recognized as one of the top 100 young math researchers in the world, Akingbade has been invited to participate in the Heidelberg Laureate Forum in Germany.

RESEARCH WITH IMPACT

Karina Thapa (Nepal)
M.S. in Data Analytics and Visulaization

Gagan Preet Singh (India)
M.S. in Data Analytics and Visualization

Building a Cloud-based Architecture to Transform Tanzanian Agriculture and Livelihoods

Climate change has had a major impact on African agriculture, resulting in up to 40% crop loss across the continent. Under the guidance of professors Brian Rowe and Andy Catlin, Karina Thapa and Gagan Preet Singh, students in the Katz School's M.S. in Data Analytics and Visualization, are building a cloud-based data infrastructure to empower Tanzanian farmers and improve crop yield.

The model analyzes data collected from an IoT device implanted in the soil, the European Centre for Medium-Range Weather Forecasts and local ministries of health and agriculture to provide millions of farmers with real-time, localized forecasts and agronomic insights, delivered to their mobile devices, that can assist in making informed decisions about irrigation, fertilization, and disease prevention.

"Our cloud-based architecture for the model, which is the soul and heart of the IoT device that is in the field, provides the farmer with real-time information so they can make better decisions," explained Karina. "Better crop yields mean fewer people go hungry, which means better livelihoods."

Anton Papa (Greece)
M.S. in Biotechnology Management and Entrepreneurship

Lab to Life: The Path to Successful Biotechnology Commercialization

Commercializing biotechnology inventions is a critical driver of both economic growth and societal progress, with the potential to improve public health and quality of life. However, important biotechnology inventions often fail to make it to market due to regulatory hurdles, funding constraints and intellectual property (IP) rights.

Albert Einstein College of Medicine's Office of Biotechnology and Business Development (OBBD) seeks partners to commercialize biotechnology inventions. In collaboration with OBBD, Anton Papa explored the commercialization potential and requirements for three novel biotechnology inventions: a technique to preserve organ and tissue, and small molecule therapies for Type I Diabetes and lung cancer.

Considering each product's IP and invention disclosure, market analysis and potential licensing partners, Papa developed comprehensive marketing briefs outlining strategies for investors, stakeholders and entrepreneurs interested in commercializing biotech inventions.
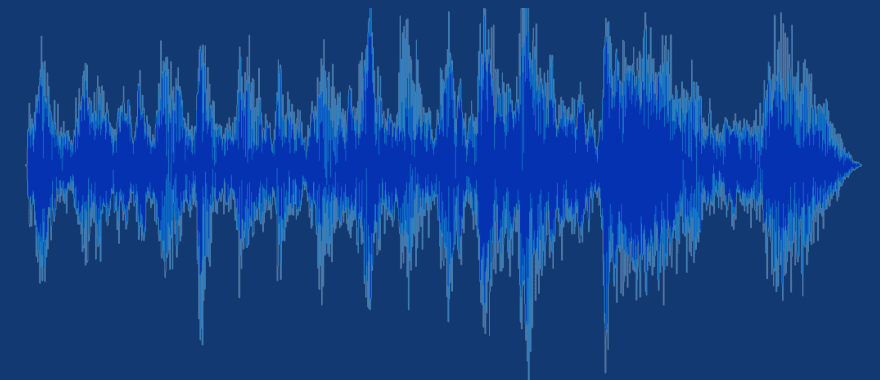
RESEARCH WITH IMPACT

Powerful AI Method to Filter Out Noise from Bird Song

Researchers from the Katz School's Department of Computer Science and Engineering and Cornell University's School of Public Policy developed ViTVS, an AI method to remove unwanted noise from bird song recordings. Using image processing technology, the method divides audio signals into distinct parts to isolate clean bird sounds from noisy backgrounds. This innovative approach, which leverages advanced algorithms and neural networks, significantly enhances the clarity of bird songs, setting a new standard in audio processing that could one day benefit the hearing impaired.

"The vision transformer architecture is a powerful tool that can look at small parts of a whole, like pieces of a puzzle, and understand how they fit together, which helps in identifying and separating sounds from noise," said Sahil Kumar, the first author of the paper and a student in the Katz School's M.S. in Artificial Intelligence.

The approach, explained in the paper "Vision Transformer Segmentation for Visual Bird Sound Denoising" has been accepted for presentation at INTERSPEECH 2024, a leading international conference on the science and technology of spoken language processing.

"Traditional and deep-learning methods often struggle with certain types of noise, especially artificial and low-frequency noises," said Youshan Zhang, a co-author of the paper and assistant professor of AI and computer science at the Katz School. "Extensive testing shows that ViTVS outperforms existing methods. It sets a new standard for cleaning up bird sounds, making it a benchmark solution for real-world applications."

Sahil Kumar (India)
M.S. in Artificial Intelligence

Study Links Manual Dexterity to Cognitive Function in Multiple Sclerosis (MS) Patients

Manual dexterity can serve as an early indicator of cognitive decline in people with MS, according to a recent paper published in the journal Multiple Sclerosis and Related Disorders. The researchers found a moderate negative correlation between manual dexterity and cognitive function—and better manual dexterity was associated with better cognitive performance. "These findings suggest that problems with manual dexterity can predict cognitive impairments in people with MS," said Dr. Rinu Abraham, corresponding author and recent graduate of the Katz School's Occupational Therapy Doctorate. "The damage to white matter in the brain, which is common in MS, might explain this link, as white matter is crucial for transmitting information between motor and cognitive regions

The study, "Exploring the Relationship Between Manual Dexterity and Cognition in People with Multiple Sclerosis: 9-Hole Peg and Multiple Cognitive Functions," was co-authored by Marissa A. Barrera PhD, MSCS, CCC-SLP, assistant dean of health sciences, and Amiya Waldman-Levi, PhD, OTRL, FAOTA, clinical associate professor of occupational therapy, under the leadership of Dr. Mark Gudesblatt, NYU Langone Health South Shore Neurologic Associates. Their findings may contribute to improved treatments and interventions for people with MS.

Rinu Abraham (U.S.)
Occupational Therapy Doctorate

FEATURED
FACULTY

Learn from world-class faculty, industry leaders and accomplished researchers. In our intimate classes, you are in constant dialogue with faculty, guest lecturers and peers, which creates a wealth of learning opportunities.
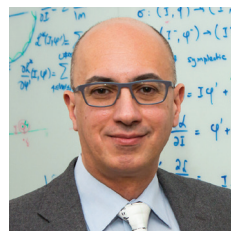
Dr. Marian Gidea
Mathematics

Associate Dean of STEM Research and Director of Graduate Mathematics, Dr. Gidea is an expert in dynamical systems and applications. Dr. Gidea has co-authored two books, published dozens of articles and spoken at more than 50 conferences worldwide. In 2021, the National Science Foundation appointed him as a program director in the Mathematical Sciences Division, a position awarded only to the most accomplished researchers. Dr. Gidea has received over $900,000 in research funding since he joined YU in 2013.

Dr. Marissa Barrera
Speech-Language Pathology

Assistant Dean of Health Sciences and Director, M.S. in Speech-Language Pathology (SLP), Dr. Barrera is an internationally recognized medical SLP and Multiple Sclerosis Certified

Specialist. She is a leading expert on the use of modalities for speech and swallowing rehabilitation and in the treatment of individuals with neurological conditions. She has lectured in over 15 countries on clinical topics including dysphagia, NMES, motor speech disorders, cognition and neurogenerative diseases. She has over 80 research abstracts and has been featured in *Women's Health, Vice Magazine,* ADVANCE for SLP, and MTV.

Dr. Honggang Wang
Computer Science

Dr. Honggang Wang, chair of the Katz School's new Computer Science Department, is a computer scientist with deep expertise in AI and its applications to digital health, 5G/6G communications and cybersecurity.

One of his discoveries was a portable, lightweight "intensive care unit," which includes a wearable biosensor system incorporating a wireless body area network that monitors remotely the physiology of infants. An IEEE Fellow and Distinguished Lecturer, Dr. Wang has received over $5 million from the National Science Foundation, National Institutes of Health and U.S. Department of Transportation.

Dr. Peggy Tallier

Senior Associate Dean and Professor of Nursing, Dr. Tallier, Ed.D., MPA, APRN, FNP-BC, is a board-certified family nurse practitioner specializing in pediatric and family medicine. Prior to joining the Katz School, she was dean of nursing at the Harriet Rothkopf Heilbrunn School of Nursing at LIU Brooklyn. She also served as research and magnet consultant for Northwell Health and New York-Presbyterian hospitals and was chief nursing officer and VP of Patient Care Services at St. Vincent Catholic Medical Center in

NYC. Her research focuses on patient outcomes, and she was most recently the PI on a multisite study on perioperative pressure injury-prevention in surgical patients.

Dr. Lorraine Cashin
Physician Assistant Studies

Assistant Dean, Professor and Director of the M.S. in Physician Assistant Studies, Dr. Cashin has been a practicing PA in emergency medicine for over 23 years. She brings deep expertise in PA program leadership and a passion for extending care to underserved communities. She established Mercy University's international medical mission and mobile health vehicle initiatives, leading faculty and students

to provide health screenings and education in Mali, Nicaragua, Colombia, the Gambia, the Dominican Republic and in the Bronx, NY. She was Founding Director of PA Services and the Sexual Assault Program at Nassau University Medical Center and served as co-PI on a multi-million-dollar NIH study of HIV primary care among women survivors of genocidal rape in Rwanda.

Andy Catlin
Data Analytics and Visualization

Andy Catlin is the founder of the tech startup Hudson Technology Group, which was acquired by Incepta. A data

scientist and data system developer, he's skilled at financial instrument pricing and forecasting using the weighted Black Scholes Merton model, as well as incorporating yield curve analysis into emerging markets products. Catlin's clients include Fidelity Investments, Smart Money, Donaldson, Lufkin and Jenrette, Manufacturers Hanover Trust, the National Football League and *The Wall Street Journal*.

Dr. Amiya Waldman-Levi
Occupational Therapy

Dr. Amiya Waldman-Levi, a clinical associate professor and director of scholarship and research in the Occupational Therapy Doctorate, is a researcher, clinician and educator with extensive experience in higher education, teaching and mentoring a diverse body of students in the United States and Israel. Her research focuses on promoting the resiliency of individuals, families and caregivers to overcome the impact that adversity has on their social-emotional functioning. She has published widely on topics related to parent-child relationships, adversity and cognition, and has diverse research experience with observational and psychometric studies, effectiveness studies, scoping review and mixed-methods designs.

Asaf Hochman
Digital Marketing and Media

An expert in startup/post-launch marketing, Asaf Hochman is global head of product marketing at TikTok, where he leads product strategy and growth for the company's ad network.

As a former product strategy and marketing leader at Facebook, he spearheaded monetization solutions for the world's leading media companies, including Disney, Viacom, NBC

and *The New York Times*. Hochman began his career as a software engineer in the Israel Defense Forces, led global product marketing at the unicorn startup Outbrain, and held digital strategy roles at various ad agencies.

Dr. David Sweet
Artificial Intelligence and Computer Science

Dr. Sweet is a quantitative trader and former machine learning engineer at 3Red Partners, a social media company in New York. He co-founded the

cryptocurrency trading company Galaxy Digital Trading, which was acquired by the first crypto-focused investment bank. He's the principal author of *KDE 2.0 Development* and a contributing author of *Special Edition: Using KDE*, both published by Macmillan. These books explore computer programming and experimental methods for ML engineers working in finance and technology. He is also the author of the book *Tuning Up: From A/B Testing to Bayesian Optimization* and has published research in *Nature*, *Physical Review Letters* and *Physical Review D*.

Dr. Emil Prodan
Mathematics

Dr. Emil Prodan, Professor of Physics, has a background in mathematical physics, specifically in operator theory, spectral analysis and constructive quantum field formalism. He recently received a three-year National Science Foundation grant for "Topological Dynamics of Hyperbolic and Fractal Lattices," and was among the 2016 recipients of the Keck Foundation research awards for the collaborative project "Engineering New Materials Based on Topological Phonon Edge Modes." In 2011, he received the NSF CAREER award for his proposal "Strong Disorder and Electron Interaction Effects in Topological Insulators."

Fayrose Fouad Abodeshisha
Physician Assistant Studies

Director of Clinical Education for the M.S. in Physician Assistant (PA) Studies, Professor Abodeshisha is a leader in both the surgical and educational arenas. As lead senior PA in trauma and acute care


surgery at New York University School of Medicine/Bellevue Hospital's Surgery Department, she acted as a senior PA on the surgical service, as PA Education Director, and as a clinical preceptor for PA students on their surgical rotations. She has been recognized for her outstanding dedication to PA education by her students and faculty colleagues alike.

Dr. Fredy Zypman
Physics

Dr. Fredy Zypman, Chair of the Department of Physics, is an expert in image reconstruction with scanning probe microscopes, atomistic modeling of materials, quantum optics, and mathematical optimization. He has co-authored more than 100 peer-

reviewed articles and has received research grants from NSF, NIH, NASA and the U.S. Department of Energy, as well as a NASA Faculty Research Fellowship and a Research Corporation award. Dr. Zypman also holds three patents on probe microscopy.
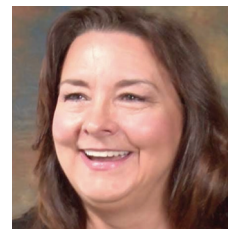
Dr. Gioia Ciani
Occupational Therapy Doctorate

Associate Professor and Program Director of the Occupational Therapy Doctorate, Dr. Ciani has been a practicing occupational therapist for over 20 years. She has held clinical positions across various practice settings and has expertise in neuromuscular rehabilitation. Prior to joining the Katz School, she served as OT Program Director, Inaugural Academic Fieldwork Coordinator, and tenured Associate Professor at Hofstra University. She has also served as Chair of the OT Department at the New York Institute of Technology and distinguished faculty member at Mercy University

Joseph Panzarella
Digital Marketing and Media

Director of the M.S. in Digital Marketing and Media program, Joseph Panzarella is a senior-level analyst and marketing professional specializing in organic social and online media advertising and the application of advanced analytical techniques to drive marketing communications and business intelligence. He's leveraged those skills for well-known brands such as Astellas, Cadillac, State Farm, Verizon,


AT&T, Pfizer, Avis Budget Group and the U.S. Department of Commerce. He's provided marketing analytics support for the 2010 U.S. Census and Brand USA—the U.S. government's first global travel organization encouraging international travelers to visit the United States and supporting the growth of travel-related American jobs.

Lorraine Marchand
Biotechnology Management and Entrepreneurship

A former executive for Bristol Myers Squibb, IQVIA, Cognizant, Covance/Labcorp and the National Institutes of Health, Marchand is currently General Manager of Life Sciences for IBM Watson Health Life Sciences. She is the co-founder of four startups and has led more than 200 clinical programs from preclinical to NDA submission and

launch. At Princeton University, Marchand was the James Wei Visiting Professor of Entrepreneurship. Her book, *The Innovation Mindset* (Columbia University Press, 2022), is the culmination of a life devoted to innovative thinking, offering a step-by step approach to turning big ideas into reality.
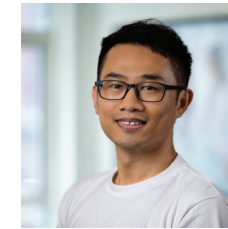
Dr. Ming Ma
Computer Science

Assistant Professor of Computer Science, Dr. Ma's expertise is in computer science, artificial intelligence and their applications in the engineering and medical fields. His research focuses on AI, geometric modeling and medical imaging, and he has published over 40 research papers in leading journals and conferences. Ming holds a Ph.D. in Computer Science from Stony Brook University and has worked as a postdoctoral scholar at Stanford University. Prior to joining the Katz School, he was an Assistant Professor in the Department of Computer Science at Winona State University.

Dr. Rana Khan
Biotechnology Management and Entrepreneurship

Founding Director of the Biotechnology Management and Entrepreneurship program, Dr. Khan is an expert in biotechnology education, cell and molecular biology, transcription

regulation and gene expression. She spent her early career as a bench scientist working in the U.S. Department of Agriculture, later becoming vice dean in the graduate school at the University of Maryland University College (UMUC) and program director for the school's professional science master's degree in biotechnology. There, Dr. Khan implemented a variety of initiatives, including an e-mentoring program, industry-sponsored capstone projects and a biotechnology symposium.

Dr. Sai Praveen Kadiyala
Artificial Intelligence

Dr. Kadiyala is a postdoctoral research fellow in artificial intelligence, with expertise in microservice security, evasive malware analysis, automotive and embedded security, approximate computing and adversarial learning. As a postdoctoral fellow in electrical engineering and computer science at Nanyang Technological University, Singapore, he worked on approximate architectures for low-power hearing aids and on cybersecurity for embedded systems. As a research scientist at Singapore's Institute for Infocomm Research, he developed anomaly detection algorithms for program behavior analysis and characterization of malware. His research is supported by grants from the Science and Engineering Research Council and A-STAR.

Sivan Tehila
Cybersecurity

Cybersecurity expert and entrepreneur Sivan Tehila is Director of the M.S. in

Cybersecurity and founder and CEO at Onyxia, a stealth mode security startup. Following a 10-year career in the Israel Defense Forces, Tehila worked as an information security officer and profiler for an Israeli defense company and held high-level security positions at a variety of other high-profile corporations. Committed to promoting women in cybersecurity, she is the founder of Cyber Ladies NYC and was recognized as a 2020 Woman to Watch in IT Security. In 2021 and 2022, she led a team of cybersecurity students to win first place in ISACA's annual Cybersecurity Challenge.

Dr. Yuri Katz
Data Analytics and Computer Science

Dr. Katz is the senior director of data science at S&P Global Market Intelligence. His team supports businesses with innovative solutions based on methods developed in the fundamental sciences and cutting-edge machine learning technologies. Previously, he was senior director of enterprise architecture for 17 years and a member of various task forces and committees that addressed major IT and strategic business initiatives. He is a frequent keynote speaker at international conferences on topics ranging from topological data analysis to credit risk and climate finance.

Dr. Youshan Zhang
Artificial Intelligence

Assistant Professor of Computer Science and Artificial Intelligence, Dr. Zhang's research interests lie in AI, machine learning, computer vision, transfer learning, manifold learning and shape analysis. His research focuses on developing computational methodologies for understanding


problems in medical image analysis (such as using machine learning methods to discover the underlying mechanisms of diseases) and computer vision (such as classification, segmentation, and object detection). He is also excited about interdisciplinary research and collaborating with researchers from related fields.

STATE-OF-THE-ART
LABS
AND CLINICS

Security Operations Center (SOC)

The first of its kind in New York City, the Security Operations Center exposes researchers and students in cybersecurity, computer science, AI and data analytics to next-generation technologies, hyper-realistic and immersive simulations, enterprise-grade networks and advanced security tools.
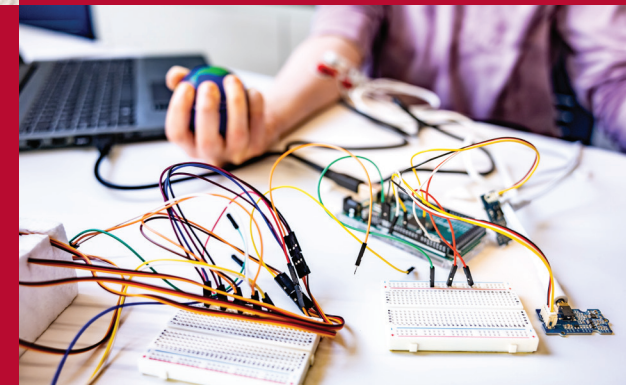
Internet-of-Things Lab (IoT)

The IoT lab provides faculty and graduate students with access to advanced sensor arrays, internet-enabled devices and a testbed for digital transformations in AI, biotechnology, security and communications.

Occupational Therapy Labs

In our occupational therapy labs, students use the latest equipment, practice and simulate interventions for a range of client populations and clinical settings and build the skills they need to become expert practitioners.

Speech-Language Pathology Virtual Community Clinic

The virtual community clinic offers free telehealth speech, language, cognitive and swallowing services to all Yeshiva University faculty, students and staff, as well as all individuals residing in New York State. The clinic is staffed by graduate student clinicians and all evaluation and treatment sessions are fully supervised by New York State-licensed faculty practitioners.

YU Innovation Lab

The YU Innovation Lab is an incubator for student entrepreneurs and an innovation hub for startups ready to explore new markets. Under the guidance of expert faculty, Katz School graduate students work with the Innovation Lab's startups on brand strategy, social media marketing, customer and audience insights.

WHY KATZ?

With a vibrant campus life and New York City at your fingertips, the Katz School is the place where bold, purpose-driven people come to create, connect and explore.

XIAOLAN LI (China)
M.S. in Artificial Intelligence
Associate Software Engineer,
JPMorgan Chase & Co

" The Katz School's curriculum is closely aligned with the skills required in the professional world, which made it easier for me to navigate the work world after graduation. The small classes meant I could really connect with faculty and classmates, and I had great opportunities to gain hands-on experience through faculty research and a summer internship at S&P Global. "

JESUS OLIVERA (U.S.)
M.S. in Data Analytics and Visualization
Data Scientist, IBM

" Thanks to the data analytics master's program, I gained the technical skills that allowed me to join one of the most prestigious technology companies in the world. I'm now designing and building solutions that I never thought I would. I needed that extra level of academic experience from the Katz School to be able to talk about the technical side of the business at IBM with confidence. "

DIEGO ACEVEDO (Paraguay)
M.S. in Biotechnology Management and Entrepreneurship
Clinical Data Manager, Merck

" The Katz School helped me discover my passion for clinical trials and develop the science and business knowledge I needed to land the job I have today at Merck, one of the top pharmaceutical companies in the world. I would recommend the Katz School for anyone who is trying to find a new career path. "

JONATHAN DEUTSCH (U.S.)
M.S. in Cybersecurity
Vice President, Information Security,
JPMorgan Chase & Co.

" You can always learn the hard skills but learning the soft skills— like how to communicate and lead a team—is just as important. That's where the Katz School was exceptional. The faculty are genuinely interested in students and are there for you. They are very passionate about their areas of expertise and want their students to succeed. "

DANI WEINGARTEN (U.S.)
M.A. in Speech-Language Pathology
Speech-Language Pathologist,
NY Neurogenic SLP

" The faculty supported and believed in me, but they didn't spoon-feed me. They were tough in all the right ways—and dedicated. "
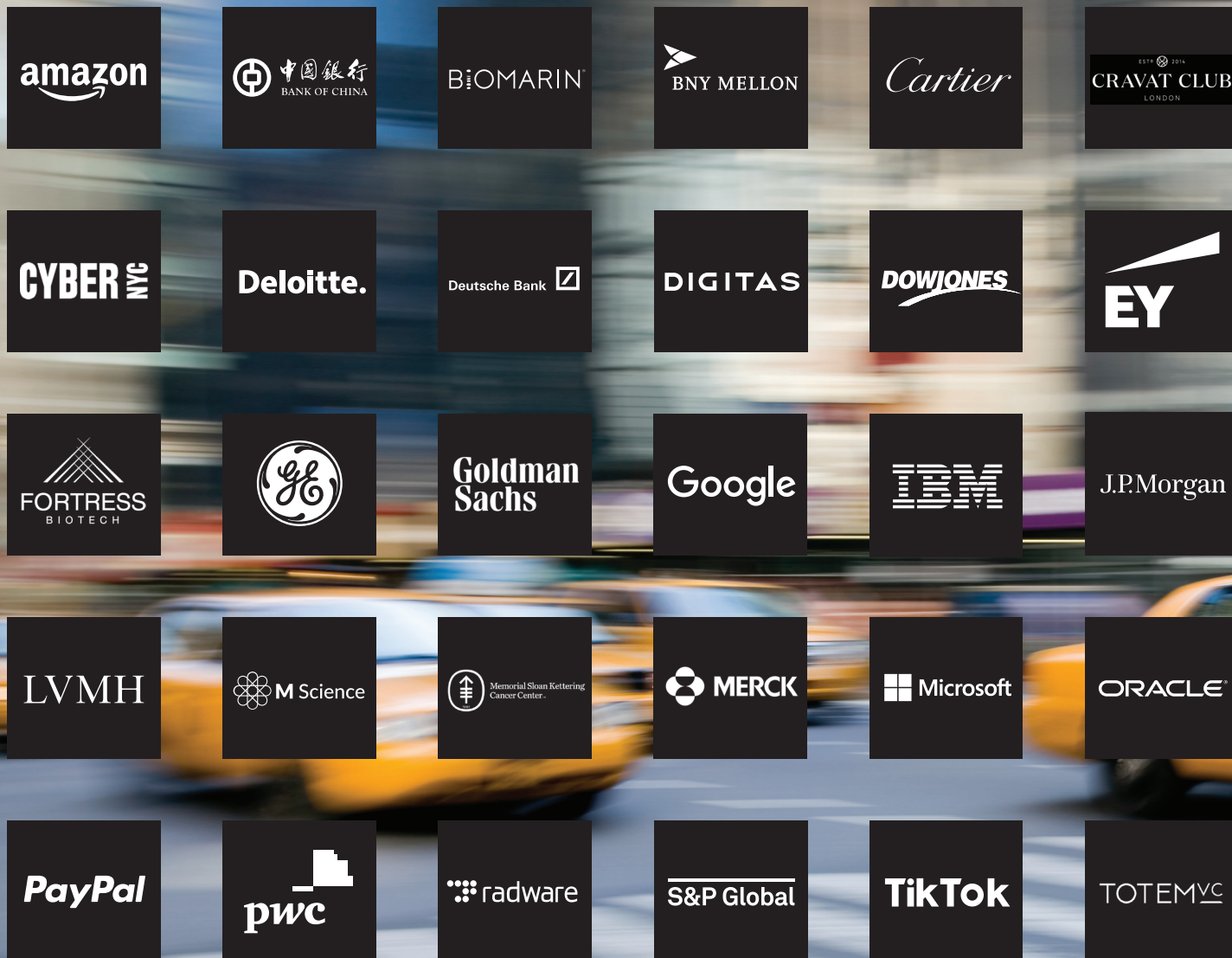
JEEHO BAE (South Korea)
M.S. in Data Analytics and Visualization
Assistant Vice President,
Morgan Stanley

" The Katz School's Midtown Manhattan location was a huge advantage when networking with professionals in the data analysis and data science fields. The program quality and practical approach to learning stand out compared with other schools. "

THE VALUE OF
A KATZ DEGREE

With a 95 percent employment rate within six months of graduation, Katz graduates land dream jobs and impactful careers with top organizations.

amazon | 中国银行 BANK OF CHINA | BIOMARIN | BNY MELLON | Cartier | CRAVAT CLUB LONDON

CYBER NYC | Deloitte. | Deutsche Bank | DIGITAS | DOWJONES | EY

FORTRESS BIOTECH | GE | Goldman Sachs | Google | IBM | J.P.Morgan

LVMH | M Science | Memorial Sloan Kettering Cancer Center | MERCK | Microsoft | ORACLE

PayPal | pwc | radware | S&P Global | TikTok | TOTEM VC

HOW TO APPLY

At Katz, we take a holistic approach to application review. We look for students with intellectual curiosity, a capacity for rigorous academic work, and a commitment to work hard and finish what they start.
If you're interested in joining an inspiring community of ambitious innovators, we encourage you to apply.

STEM PROGRAMS

All applicants to Katz School STEM master's programs must submit the following:

- Completed online application
- US $50 non-refundable application fee
- Supporting documents, including:
  —Transcripts from all colleges and universities attended
  — Statement of purpose
  — Resume/CV
  — Proof of English proficiency (if you are an international student)
  — Recommendation letters (required for Math and Physics programs only)
  — GRE and/or GMAT scores (required for Math and Physics programs only)

Applicants must also meet any knowledge requirements—including any prerequisite coursework—for their intended program. Please refer to the program website for more information.

HEALTH SCIENCE PROGRAMS

Admissions requirements and application information for Katz School's health science programs are available on the respective program web pages.

STEM FELLOWS SCHOLARSHIP

Join the next generation of science and tech innovators. The STEM Fellows program is open to both domestic and international students. All STEM programs are STEM OPT eligible for international students.

Learn more at www.yu.edu/katz/stem-fellows.

READY TO APPLY?

Contact katzgrad@yu.edu or visit www.yu.edu/admissions for more information.

We're happy to speak with you about any aspect of the admissions process as well as your academic and career goals.

Katz School of Science and Health
Yeshiva University
205 Lexington Avenue, 6th Floor
New York, New York 10016

EMAIL
General Admissions: katzgrad@yu.edu
Nursing Admissions: katznursing@yu.edu
Phone: 646.592.4753
Web: www.yu.edu/katz

YUKatzSchool

YUKatzSchool

Katz School at Yeshiva University

Katz
Katz School
of Science and Health

3 NYC CAMPUSES

Beren Campus—Main

**32nd St. and Lexington Ave.,
New York, NY**

Home to the Katz School's STEM and Speech-Language Pathology programs, the Beren Campus is in the heart of midtown Manhattan, just two blocks from the Empire State Building.

Beren Campus—Nursing

**41st St. and 2nd Ave.,
New York, NY**

The Katz School's Nursing programs meet in a state-of-the-art facility five minutes from Grand Central Station and blocks away from some of the city's best hospitals and clinics.
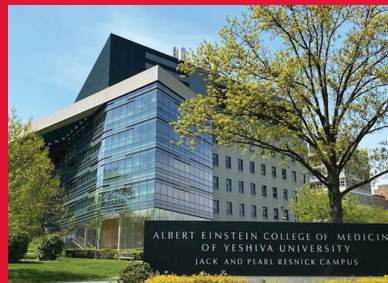
Jack and Perl Resnik Campus

**1300 Morris Park Ave. and
1165 Morris Park Ave., Bronx, NY**

The Katz School's Occupational Therapy and Physician Assistant programs are housed on a lush green campus in the Bronx, surrounded by hospitals, clinics and the Albert Einstein College of Medicine.