CARNEGIE MELLON UNIVERSITY - A M B A S S A D O R S -

June 15, 2018

Dear Friends of Carnegie Mellon,

Greetings from Carnegie Mellon University during one of my favorite times of year. I am writing to you shortly after 5,600 members of the Class of 2018 joined our alumni community, armed with the tremendous power of a Carnegie Mellon degree. As we celebrate these bright and eager CMU graduates, their joy is truly infectious and reflects the entire community's passion and excitement for all that lies ahead for this university.

I know that you also share remarkable pride in our newest alumni, as well as this incredible institution. It's with this in mind that I'm pleased to send you this first edition of the Carnegie Mellon University Ambassador Program. We are launching this initiative to keep our closest supporters better informed about the vital work that goes on here at CMU. Throughout the year, you will receive this exclusive, curated package of our latest news — both the big headlines, as well as interesting stories that illustrate CMU's rich tapestry of research, creativity and ingenuity.

Whether you serve on a board, volunteer on behalf of the university, or provide philanthropic gifts to our programs, your ongoing advocacy for CMU has an impact. Our request of you is simple: Keep doing what you have been doing in support of Carnegie Mellon. And when you talk to your family, friends and colleagues about CMU, you will now have even more information about all that is happening here.

My wife, Tris, and I have been so appreciative of the outpouring of goodwill following the announcement of my selection as CMU's tenth president. Since then, we have been thrilled to have the opportunity to interact with so many of you — our alumni, parents and supporters.

The past few months have been a whirlwind of activity for Carnegie Mellon. In April, we completed CMU's 50th Anniversary tour in Washington, D.C., following stops across the country and around the world. Celebrating our 50th anniversary as a comprehensive research university with more than 10,000 people has been so gratifying — and I know the many faculty who joined us were delighted to speak directly with you about their transformative work.

Now, we are ready to realize our vision for the next 50 years. Carnegie Mellon is poised like no other institution to make a real and lasting impact on a global society that is rapidly changing. With our expertise at the nexus of technology and humanity, and an entrepreneurial culture that thrives on collaboration, the people of CMU are anticipating and solving the world's greatest challenges.

I'm pleased to report that we are making tremendous strides toward that vision. The first building of the new David A. Tepper Quadrangle is nearing completion, and will officially open this fall. At more than 300,000 square feet, this transformative space will be the new home for the Tepper School of Business and will also serve as a campus hub where *all* members of our community can come together to collaborate, innovate and learn. Construction has also begun on the new ANSYS Building, the latest expansion of the College of Engineering's Maker Ecosystem.



We continue to be the world leader in computer science, but also in examining the ethical implications of technology. The School of Computer Science just announced the **country's first undergraduate degree program in artificial intelligence**. And **Keith Block and Suzanne Kelley's recent \$15 million gift to establish a new center** in our Heinz College of Information Systems and Public Policy will advance research and education at the intersection of technology and society. This groundbreaking initiative will help to help promote more widespread access to the benefits of technological change.

We are making significant investments to enhance the strength of our science programs. For the first time, the **Mellon College of Science dean will be supported by an endowed chair thanks to a generous commitment from alumnus Glen de Vries**. This gift will allow Dean Rebecca Doerge and her successors to invest in fundamental sciences, in interdisciplinary initiatives, and in faculty and students.

Our commitment to the arts has never been stronger. We are beaming with pride after six CMU alumni from the College of Fine Arts received a record-breaking 12 Tony Award nominations this year. In addition, graduate students in our top-ranked Masters of Fine Art program will have a new home when the university converts an entire floor in the GSIA building into 18 studios and other flexible spaces. This commitment will empower future generations of artists, thinkers, and engaged cultural figures.

And finally, students across the country and around the world are making CMU their top choice. This year, we saw a **record-breaking number of applicants for the Class of 2022** — a 19 percent increase over last year. All six undergraduate colleges saw double-digit increases, with a large surge in the number of applicants who are women or people of color. This high quality, diverse student body will add new energy to our campus community this fall.

This selection of recent stories is just a small taste of all the exciting things happening at Carnegie Mellon. Thank you for being a CMU Ambassador, and for everything you do for this university. Tris and I wish you a wonderful summer, and look forward to seeing you on campus or at an event near you in the coming year.

Sincerely,

Fairan Jahanian

Farnam Jahanian President and Henry L. Hillman President's Chair

College kids will be able to **MAJOR IN AI AT CARNEGIE MELLON** It's the first artificial intelligence degree for undergraduates, the Pittsburgh university says

By Stephen Shankland

— MAY 10, 2018 —

Carnegie Mellon, a university renowned for its robotics and computer science program, will offer college students a degree in artificial intelligence starting this fall.

AI, boosted by new machine learning and neural network technology, is racing across the computing industry. Its chief virtue is an ability to learn patterns from real-world data — a lot of photos labeled "cat," for example, instead of some attempt to describe in programming terms that a cat has two round eyes, whiskers and pointy ears. AI is endowing computers, phones and online services with a new level of sophistication and human-friendly abilities.

"Specialists in artificial intelligence have never been more important, in shorter supply or in greater demand."

–Dean of the School of Computer Science Andrew Moore

"Specialists in artificial intelligence have never been more important, in shorter supply or in greater demand by employers," said Andrew Moore, dean of the university's School of Computer Science, in a statement Thursday. It's the first AI undergraduate degree program in the country, the university said, open to 30 to 35 students a year.

It's notable as a reflection of how hot AI is in the tech industry right now. But Carnegie Mellon's embrace also indicates that it believes AI technology is within the grasp of an undergraduate. With lots of open-source tools like Google's TensorFlow and Facebook's new AI site, there's plenty of material available for students who want to get started.

Some big uses of AI are recognizing images in photos or videos, understanding human speech, and giving voice to text in realistically human tones. For an illustration of how fast the state of the art has progressed, check the convincingly lifelike voices from Google's Duplex project, unveiled this week at the company's I/O conference.

It's not just Google that's spending big on AI, though. Facebook is blending AI into several of its operations, and Microsoft's Azure service is getting fast new AI abilities



Andrew Moore moderates a panel discussing artificial intelligence as part of CMU's 50th Anniversary celebration.

through its Project Brainwave. Forrester analyst Mike Gualtieri thinks AI is on its way to being a standard part of what computers do in just about any business.

Lots of people are worried about AI, either because the technology could be abused, manipulated or hacked, or be used to push humans out of the workforce.

Carnegie Mellon's program, though, will address issues of ethics and social responsibility. "This will include independent study opportunities in using AI for social good, such as improving transportation, health care or education," the university said.

Inside **Philanthropy**

Brave New World: A TECH COUPLE'S GIFT TO EXPLORE THE "FUTURE OF WORK"

By Mike Scutari

— MARCH 30, 2018 —

In our 2017 Philanthropy Forecast, we predicted that donors would step up and address growing fears surrounding widespread automation.

It was a reasonable expectation. Since the tech industry is helping usher in the job-eliminating automation, one would suspect that some of its leaders would consider how to deal with the societal fallout, right?

Not exactly.

Despite Paul Allen's latest AI give and burgeoning funder interest in "AI watchdogs" and universal basic income, the gains here have been relatively modest. Most funders, even those in the workforce and

"Foreseeing and addressing the challenges posed by the rapidly increasing role of technology in our lives is a critical focus of our work here." –Farnam Jahanian



President Farnam Jahanian, Suzanne Kelley, Keith Block and Dean Ramayya Krishnan during Carnegie Mellon's 50th Anniversary event in San Francisco on February 21, 2018.

tech fields, have yet to tune into the issue of automation in a meaningful way. This should be a cause for alarm since, if we're to believe the experts, automation threatens to fundamentally and irrevocably alter the fabric of human society itself.

All of which makes news out of Pittsburgh so intriguing (and hopefully portentous).

Keith Block, vice chairman, president and COO of Salesforce, and his wife,

Suzanne Kelley, VP of operations & PMO, global business units at Oracle Corporation, made the lead \$15 million gift to establish the Block Center for Technology and Society at Carnegie Mellon University's Heinz College of Information Systems and Public Policy.

With an initial focus on "the future of work," the Block Center's mission is to ensure that advanced technology has "positive benefits for all members of the global community." As such, it will examine the "impact of technology on the ways in which workers at all skill levels will make their living in the 21st century."

"Foreseeing and addressing the challenges posed by the rapidly increasing role of technology in our lives is a critical focus of our work here at Carnegie Mellon," said Farnam Jahanian, president.

Block is a member of the university's Board of Trustees, earned a master's of science degree in Management and Policy Analysis and a bachelor's of science degree in Information Systems from Carnegie Mellon in 1984. He is a longtime member of the Heinz College Dean's Advisory Board and established the Keith Block Entrepreneurship Fund to promote entrepreneurship among Heinz College students.

Salesforce, of course, is the ubiquitous cloud computing juggernaut with a growing corporate philanthropic footprint. Automation is central to its suite of predictive customer relationship management products. It helps companies "streamline" their operations.

I mention this because while the benign term "the future of work" was included in the school's press release, the word "automation" was not — and rightly so. The word does not inspire much confidence.

A recent report by McKinsey Global Institute claims that as many as 800 million jobs — and 73 million in the U.S. alone — could be lost worldwide to automation. Another study by PwC estimated that as many as 38 percent of jobs in the U.S. could be "susceptible to automation by robots and AI" by the early 2030s.

Not everyone is entirely fatalistic about the future. Google's Eric Schmidt argues that while some jobs are undeniably being lost to automation, more jobs will ultimately be created to replace them as a result of technological advancements. (Then again, it behooves Schmidt, who other kinds of jobs being wiped out, including in areas like retail that have been a bastion of low-wage work. (Used a self-checkout machine lately?) Even lawyers have lost work as new technology has automated the discovery process of going through myriad pages of documents. But all these changes so far may look like a tea party compared to what's in store in the next 30 years.

While it's not clear what philanthropy can do about such a seismic



works for what is perhaps the biggest automation proponent of them all, to be less-than-fatalistic.)

Bottom line, here? At the end of the day, most analysts seem to agree that widespread automation will be a net loss for the average worker — and that this pain is already being felt. Many point out, for example, that automation is a better explanation for the loss of well-paying manufacturing jobs than global trade. And signs abound of trend, one question is this: Will the techno-alarmists back up their concerns with the money, programs and infrastructure necessary to explore and see how society might mitigate — the potentially catastrophic effects of automation?

Time will tell, but in the interim, the Blocks' gift to CMU to explore "the future of work" is an important sign that at least some donors are paying attention.

THE FUTURE OF SCIENCE AT CMU IS NOW

— APRIL 26, 2018 —

THE GLEN DE VRIES DEAN'S CHAIR POSITIONS CARNEGIE MELLON AT THE VANGUARD OF INNOVATIVE SCIENCE EDUCATION AND RESEARCH

In the Mellon Institute, where generations of scientists have climbed the iconic stone steps, Rebecca Doerge was installed on April 24 as the inaugural Glen de Vries Dean's Chair of the Mellon College of Science, an event that moved the future of science at Carnegie Mellon University one giant step forward.

Members of the CMU community, including deans, faculty, students and special guests, gathered to celebrate de Vries' generosity, as well as Doerge as a scholar and leader. The dean's chair endowment will create opportunities for investments in fundamental science, interdisciplinary initiatives, and faculty and students for years to come.

Alumnus Glen de Vries, the president and co-founder of Medidata Solutions, the leading global provider of cloudbased technology for clinical research, donated \$10 million to endow the chair of the dean at Mellon College of Science in December 2017. Previously, the scientist and entrepreneur endowed a Presidential Fellowship in the biological sciences at CMU.

Speaking at the installation, CMU President Farnam Jahanian expressed how the de Vries gift will allow the Mellon College of Science to continue to push the boundaries at the forefront of innovation in science by building on CMU's



President Farnam Jahanian, Dean Rebecca Doerge, Glen de Vries and Interim Provost Laurie Weingart at the installation on April 24, 2018.

strengths in interdisciplinary education and research and data/computation.

"The long-term success of science at CMU requires sustained resources. This generous gift comes at an important moment for science at CMU, and it is a strong endorsement of where we are headed as a university," Jahanian said.

De Vries, who received his undergraduate degree in molecular biology and genetics from Carnegie Mellon in 1994, spoke with deep affection about his time at CMU as a student and its influence on his career path, as well as his close relationship with Doerge.

"Carnegie Mellon made me ... me. The work here has an incredibly outsized effect on the world," de Vries said during the event. "I am really excited about what we can do around science at CMU."

Doerge, an interdisciplinary researcher whose research spans biological sciences,

statistics and data science, was named MCS dean in 2016. The endowment provided by de Vries' contribution gives her and her successors the flexibility to pursue high-risk/high-payoff research that is often the most difficult for which to find funding.

"This gift means that we have young alumni like Glen who recognize and appreciate the value of their education here, and are willing to invest in MCS's future," Doerge said. "This gift is about giving Mellon College of Science the freedom to be visionary. We will build on all of our collective strengths to elevate science at this university. We will do this by doing foundational research and developing technologies that will lead to tomorrow's greatest discoveries. We will train leaders who look outside their disciplines to solve problems, and we will prepare those leaders to make a great impact, just like Glen continues to do."

Six Carnegie Mellon Alumni Nominated for 12 TONY AWARDS

– MAY 01, 2018 —

NOMINEES REPRESENT LIGHTING, SOUND AND COSTUME DESIGN; ACTING; AND PRODUCING

Six Carnegie Mellon University alumni received a record-breaking 12 Tony Award nominations this spring. School of Drama alumnus and 2016 Tony Award winner Leslie Odom, Jr. and actress and singer Katharine McPhee co-hosted the nominations announcement.

Five alumni were nominated for their outstanding behind-the-scenes work. Peggy Eisenhauer and Jules Fisher were nominated for lighting design, and Peter Hylenski and Ann Roth received nominations in sound and costume design, respectively. Producer Jamie deRoy received five nominations.

Grey Henson also was nominated for his featured role in the Broadway musical "Mean Girls."

"CMU congratulates our alumni for their distinctive contributions to Broadway's best productions and to the performing arts more broadly," said CMU President Farnam Jahanian. "Our partnership with the Tony Awards, and commitment to the Excellence in Theatre Education Award, reflects the value we place on arts education and its impact on people and society."

CMU will present the fourth annual Excellence in Theatre Education Award at the Tony Awards this year. The award is the first national honor to recognize K-12 theatre educators.



Carnegie Mellon University alumnus Grey Henson was nominated for a Tony Award for Best Featured Role in a Musical for his role as Damian Hubbard in "Mean Girls."

CMU alumnus and 2017 Tony nominee Josh Groban will co-host the Tony Awards with singer, songwriter, actress and Tony nominee Sara Bareilles on June 10. The Tony

"I majored in theater at Carnegie Mellon University, and I like to say, really, I majored in empathy." –Leslie Odom, Jr.

Awards are presented by The Broadway League and the American Theatre Wing.

"We're extremely proud of the work our alumni are engaged in to earn these nomi-

nations," said Dan J. Martin, dean of CMU's College of Fine Arts. "Clearly, our School of Drama prepares our graduates in not only the acting skills to be part of a cast onstage, but also the expertise in those essential elements it takes to make a production come to life — lighting, sound, costumes and producing."

Following this nominations announcement, Odom talked about the importance of arts education in his life.

"I majored in theater at Carnegie Mellon University, and I like to say, really, I majored in empathy," Odom said. "Art teaches you how to walk in someone else's shoes with compassion and understanding, and those are powerful lessons, whatever arena you decide to go into, whatever profession you choose to pursue." The following CMU College of Fine Arts alumni, presented in alphabetical order, have been nominated for Tony Awards this year.

Jamie deRoy, Class of 1967, Producer

- Best Play for "Latin History for Morons"
- Best Musical for "The Band's Visit"
- Best Revival of a Play for "Three Tall Women" and "Angels in America"
- Best Revival of a Musical for "Once on This Island"

Jamie deRoy is the celebrated host and producer of the critically acclaimed variety show, "Jamie deRoy & friends," and a threetime Tony Award-winning producer. "A Gentleman's Guide to Love and Murder" was the Best Musical in 2014 and "Vanya and Sonia and Masha and Spike" was the Best Play in 2013. "The Norman Conquests," which she produced with CMU alumnus Martin Platt, was the Best Revival of a Play in 2009. In total, deRoy has worked on more than 50 Broadway and 40 off-Broadway productions. An accomplished actress, record producer, comedian and talk show host, she has won eight MAC Awards, four Back Stage Bistro Awards, 11 Telly Awards, and CaB Magazine's Lifetime Achievement Award for her work on both stage and screen.

Peggy Eisenhauer, Class of 1983

- Best Lighting Design of a Musical for "Once on This Island"
- Best Lighting Design of a Play for "The Iceman Cometh"

Recipient of three Tony Awards and nine nominations, Peggy Eisenhauer is one of the most accomplished lighting designers across the theater, film and music industries. She and fellow CMU alumnus Jules Fisher have collaborated on lighting designs for more than 30 years. Eisenhauer has worked on more than 20 Broadway shows and in 2010 was selected as one of Variety's 100 Women of Impact in Hollywood. Her film credits include "School of Rock," "Dreamgirls," "Enchanted" and "My Week with Marilyn."

Jules Fisher, Class of 1960

- Best Lighting Design of a Musical for "Once on This Island"
- Best Lighting Design of a Play for "The Iceman Cometh"

One of the world's foremost theatrical lighting designers, Jules Fisher has won a record nine Tony Awards for best lighting design — a category he has been nominated for 12 times. Credited with lighting designs for more than 200 Broadway and off-Broadway productions, during his 50-year career Fisher has also worked extensively in film, ballet, opera and television. He and fellow CMU alumna Peggy Eisenhauer have been professional partners since 1985, having formed Third Eye Studio, a firm specializing in entertainment and theater lighting.

Grey Henson, Class of 2012

• Best Performance by an Actor in a Featured Role in a Musical as Damien in "Mean Girls"

Hailed as the breakout star of Broadway's "Mean Girls," Grey Henson made his Broadway debut playing Elder McKinley in "The Book of Mormon," a role he also portrayed in the musical's national tour. On television he has guest-starred on ABC's comedy "Suburgatory."

Peter Hylenski, Class of 1997

• Best Sound Design of a Musical for "Once on This Island"

Peter Hylenski has provided sound designs for over 30 Broadway productions including "Shrek the Musical," "Cry-Baby," "Motown the Musical," "The Wedding Singer" and "Sweet Charity." He received his first of four Tony nominations in 2009 for his sound design for "Rock of Ages." Hylenski also has been nominated for Olivier, Grammy and Drama Desk Awards. He's designed for Carnegie Hall, Radio City Music Hall and the Kennedy Center. Upcoming projects include Broadway's "King Kong" and "The Prom."

Ann Roth, Class of 1953

- Best Costume Design of a Musical for "Carousel"
- Best Costume Design of a Play for "Three Tall Women" and "The Iceman Cometh"

Anne Roth is among the most accomplished and prolific costume designers in history, with more than 100 films and dozens of Broadway credits to her name. She has won Academy, BAFTA, Drama Desk and Tony awards. Her first Tony Award win was in 2013 for "The Nance"; she has been nominated a total of six times. She is also the recipient of an Irene Sharaff Lifetime Achievement Award, one of the highest honors in American Costume Design. Roth has more than 50 additional Broadway credits.

Excellence in Theatre Education Award Winner Will Be Recognized at the Tony Awards

The Excellence in Theatre Education Award annually recognizes theater educators in the U.S. who demonstrate monumental impact on the lives of students and who embody the highest standards of the profession. CMU is the exclusive higher education partner of the Tony Awards, and the two organizations launched the award as part of the collaboration. CMU alumnus, actor and producer Zachary Quinto is serving as the national award ambassador this year.

A panel of judges composed of the American Theatre Wing, The Broadway League, CMU and other leaders from the theater industry select the finalists and winner. School of Drama Head Peter Cooke, AM, Ph.D., and alumnus Grey Henson represented CMU as judges. A single winner will be selected to receive the Excellence in Theatre Education Award and recognized at the Tony Awards.

Carnegie Mellon alumni have won 44 Tony Awards. CMU's School of Drama is the oldest degree-granting drama program in the United States and consistently ranks as one of the world's best drama schools. The school is recognized as an international leader in arts and technology. Year after year, the School of Drama produces graduates who go on to do award-winning work, both on stage and behind the scenes.

ARTFORUM

Carnegie Mellon's School of Art to Open NEW FACILITY FOR ITS MFA PROGRAM

— MAY 01, 2018 —

Carnegie Mellon University in Pittsburgh announced today that the School of Art's graduate students will soon have a new home. The university has been working on converting the entire top floor of the Graduate School of Industrial Administration building into a flexible space for its Masters of Fine Art program. Once it is completed in the fall of 2019, the facility will include eighteen individual studios, study and public gathering areas, and administration offices.

"The university's commitment to expanding, improving, and enhancing the resources across the College of Fine Arts is paramount." –Farnam Jahanian

The program's students and faculty are currently spread out across two buildings. The lack of a centralized space hinders collaboration among the students and divides resources for the school. The new versatile facility



Rendering of the School of Art's new graduate facility.

will also allow for a much-needed expansion of its undergraduate program, which will take over the MFA students' former classroom and studio spaces.



"Since its founding, the arts have been fundamental to education at Carnegie Mellon University," said President Farnam Jahanian. "The university's commitment to expanding, improving, and enhancing the resources across the College of Fine Arts is paramount. The School of Art's new graduate facility will provide its top-ranked MFA program with the resources required to continue shaping future generations of artists, thinkers, and engaged cultural figures."

Reprinted with permission © Artforum, April 26, 2018, "Carnegie Mellon's School of Art to Open New Facility for its MFA Program."

Applicants to Carnegie Mellon SURGE TO RECORD HIGH, Building in Quality and Diversity

— MARCH 15, 2018 ——

UNIVERSITY SEES INCREASES ACROSS ALL UNDERGRADUATE SCHOOLS AND COLLEGES

Carnegie Mellon University attracted a record-breaking 24,351 applicants for admission to the Class of 2022, a 19 percent increase over last year's pool. It is the largest year-to-year increase and the most applicants in the university's history.

The surge in undergraduate applications, one of the largest in the nation this year, follows close on the heels of several other admission milestones for Carnegie Mellon. In 2016, the university enrolled record numbers of women in computer science and engineering, at 2-3 times national averages. In 2017, the university enrolled more women undergraduates than men for the first time in its history, the same year the university saw an uncommon leap in the number of admitted students who chose CMU, from 30 to 37 percent.

It all falls at a time of extraordinary momentum for CMU, which announced the week before that Farnam Jahanian — nationally



Students participate during Playfair in August 2017, which is part of CMU's annual orientation activities. The surge in undergraduate applicants for the Class of 2022 follows close on the heels of several other admission milestones for Carnegie Mellon.

recognized computer scientist, successful entrepreneur, senior public servant and respected leader in higher education — had been appointed the president of the university.

> 24,351 APPLICANTS to the Class of 2022

"Carnegie Mellon offers a distinctive education with a focus on problem-solving and fearless creativity at the edges and intersections of traditional boundaries," Jahanian said. "This rapid growth in interest from potential undergraduates reflects a growing recognition among students and their families that CMU is the destination of choice for those seeking to make an impact on the world." The growth in applicants spanned all six of Carnegie Mellon's undergraduate colleges. The School of Computer Science saw a 30 percent increase in applicants from last year,

" The accomplishment and potential of our incoming students continues to grow. "

–Dean of Admission Michael Steidel

followed by the Dietrich College of Humanities and Social Sciences (up 29 percent), the Tepper School of Business (up 26 percent) and the Mellon College of Science (up 20 percent). The College of Engineering and the College of Fine Arts also posted double-digit increases.

"The growth in the number of our applicants is a result of the university's commitment to attracting diverse and outstanding students who want an education that will give them the skills, creativity and confidence to tackle important human challenges," said Laurie Weingart, interim provost. "That commitment starts at the leadership level and includes the dedicated efforts of our deans and other academic leaders, along with our admission professionals." The diversity of the applicant pool also grew at record pace, including increases in applications from Asian-Americans (up 30 percent), African-Americans (up 26 percent), and Hispanic-Latinos (up 20 percent). International student applicants increased by 7 percent. The pool of female applicants also continued to grow dramatically, up 22 percent from last year.

"When you think about what makes a university great, it's really not a homogenous community, it's a diverse community that makes us so significantly stronger," said Dean of Admission Michael Steidel. "And by quantitative and qualitative metrics, the accomplishment and potential of our incoming students continues to grow." INCREASE IN APPLICATIONS Across the University

> 30% School of Computer Science

29% Dietrich College of Humanities and Social Sciences

> 26[%] Tepper School of Business

20% Mellon College of Science

