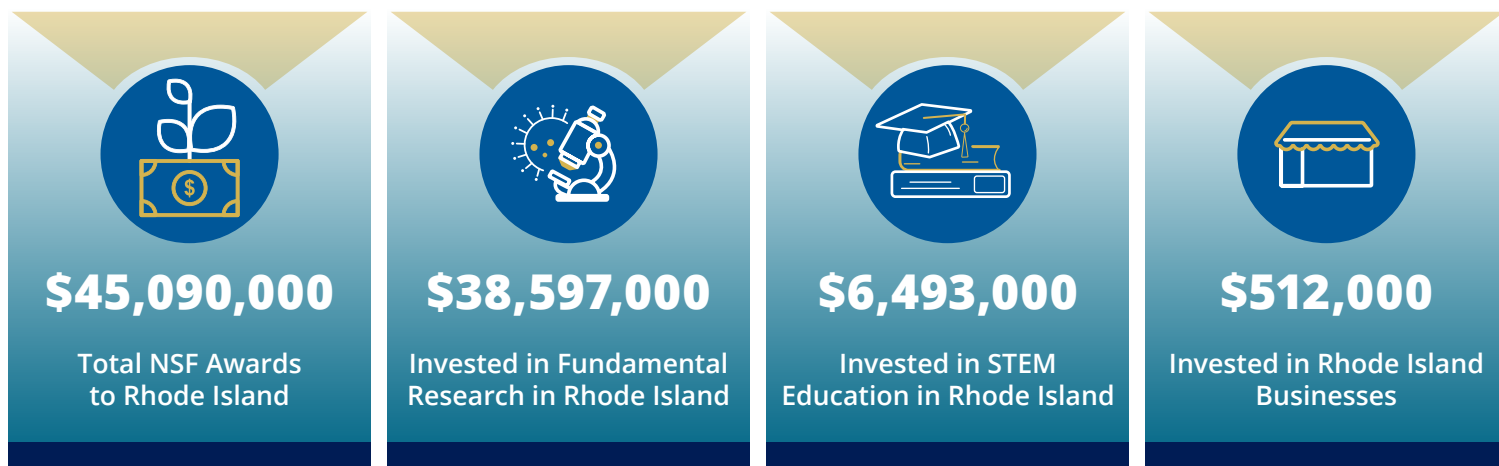


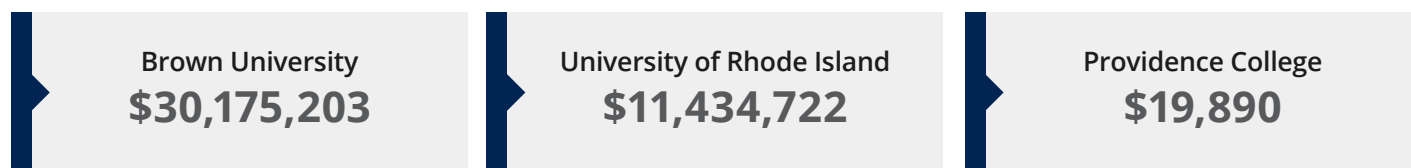


# RHODE ISLAND

## FY 2022 Fast Facts

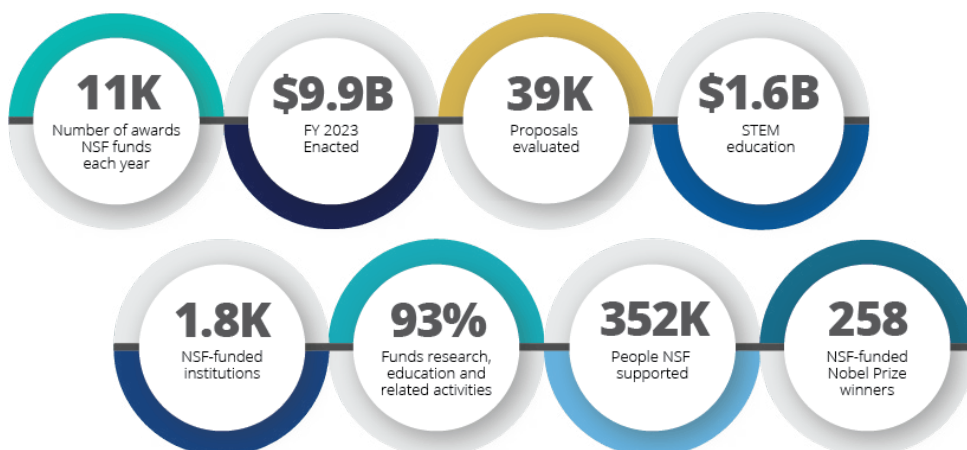


## Top NSF-funded Academic Institutions for FY 2022



## NSF By The Numbers

The National Science Foundation (NSF) is a [\\$9.5 billion](#) independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.



*Data represents FY 2022 Actuals unless otherwise indicated.*



## Expanding the Frontiers of Science

Complex underwater environments, such as underwater caves, flooded mines, offshore wind farms and under-ice waters have significant societal and scientific impacts. For example, surveying underwater cities and exploring underwater caves provide evidence about human history, and the health of underwater infrastructure is extremely important for reliable energy and the blue economy. While these complex environments make it challenging and risky for human divers to perform repeated surveys, underwater robots must be considered as viable alternatives. This NSF award at the **University of Rhode Island** supports fundamental research in robot design, control and perception to overcome the challenges faced in complex underwater environments. A highly maneuverable underwater robot will be designed, fabricated and tested for moving in tight, complex spaces as proof of concept. The robot will be made accessible and customizable with the aim to grow and broaden the underwater robotics research community. The overarching goal of the project is to increase the functionality and reliability of underwater robots in complex environments.



## STEM Education and Broadening Participation

Healthcare is rapidly changing into a multidisciplinary field, and data science and artificial intelligence have become integral for healthcare and medical services. Machine learning, a branch of AI, is broadly applicable for developing predictive models that drive research, development and healthcare practices. However, unintentional bias within the datasets and computer programs used for machine learning creates healthcare outcomes which benefit some people more than others. This project, led by the **East Bay Educational Collaborative**, will develop an innovative and inclusive learning and teaching ecosystem that engages up to 1,000 Rhode Island high school students with an emphasis on recruiting racial minorities and young women from 12 Title 1 schools. The ecosystem consists of educational agencies and teachers, cross-disciplinary expertise from data scientists and medical clinicians, community members and college students from diverse background as mentors. Computer science teachers will facilitate the course and receive professional development in problem-based data science approaches. Students in the course will explore student-led, inquiry-based strategies on how to navigate and visualize large healthcare sets using the same programming languages and tools as data scientists. The project is funded by NSF's Innovative Technology Experiences for Students and Teachers program, which seeks to engage underrepresented students in technology-rich learning, including skills in data literacy, and increase students' knowledge and interest in information and communication technology careers.



## Regional Innovation Engines

The NSF Engines program envisions fostering flourishing regional innovation ecosystems across the country, providing a unique opportunity to spur economic growth in regions that have not fully participated in the technology boom of the past few decades. The NSF Engines program uniquely harnesses the nation's science and technology research and development enterprise and regional-level resources. NSF Engines can catalyze robust partnerships rooted in scientific and technological innovation to positively impact the economy within a geographic region, address societal challenges, and advance national competitiveness. [Find potential NSF engines in your state.](#)



### EPSCoR

**COMPETITIVE RESEARCH** | Rhode Island is one of 28 U.S. states or territories under [NSF's Established Program to Stimulate Competitive Research \(EPSCoR\)](#). Over **\$2,720,000** in awards have been made to Rhode Island academic institutions through EPSCoR in FY 2022. For more information, [visit Rhode Island's EPSCoR state web page.](#)



### NCSES

According to the [National Center for Science and Engineering Statistics \(NCSES\)](#), which is housed in NSF, 30% of science, engineering and health doctorates conferred in Rhode Island are made in life sciences. Visit Rhode Island's science and engineering state profile to learn more!

**33.77%** of Rhode Island's [higher education degrees are concentrated in S&E fields.](#)

**5.44%** of Rhode Island's [workforce are employed in S&E occupations.](#)

**7.22%** of Rhode Island's [total employment is attributable to knowledge - and technology - intensive industries.](#)

## Learn More

**CHIPS & SCIENCE** – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. [For more information, please visit NSF's CHIPS and Science website.](#)

**RESEARCH SECURITY** – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. [To learn more, please visit NSF's Research Security website.](#)

**CONNECT WITH NSF** – For more information on NSF's impact in your state, please contact NSF's Office of Legislative and Public Affairs at [congressionalteam@nsf.gov](mailto:congressionalteam@nsf.gov).