Do you know a bright, curious student who sees possibilities they can create with science, technology, engineering, and math?

That student may be a perfect fit for the Beaver Works Summer Institute, a four-week program at MIT that challenges high school students to tackle high-tech projects.

The Beaver Works Summer Institute (BWSI) offers the following projects annually:

Autonomous RACECAR Grand Prix
Program the artificial intelligence for a self-driving 1/10th scale car and race it against other teams in an autonomous Mini Grand Prix.

Unmanned Air System Synthetic Aperture Radar
Don't just fly a drone…build one with a radar collect data on the fly, process it, and use the complete system to sense the world around you in new ways!

Autonomous Cognitive Assistant
Create your own artificial intelligence applications from scratch and customize personal assistants like the Amazon Alexa.

Hack a 3D Printer
Build a 3-D printer, while learning about additive manufacturing, then design new features and functions to take it to the next level.

Remote Sensing for Crisis Response
Students will explore real world datasets ranging from local drone imagery to large area satellite imagery to aid in disaster recovery and prevention. Students will develop experience in an area of data science that is poised to play a critical role in understanding our world.

Autonomous Air Vehicle Racing
Take autonomous vehicles to a new dimension and make a quadcopter smart enough to race in an obstacle course by itself.

Build a CubeSat
Design a small satellite for a big science mission. Prototype, demonstrate, and test the components that may get your team's system launched into space with other experimental CubeSats.

Embedded Security and Hardware Hacking
Learn the basics of embedded security and hardware hacking by designing your own secure system and performing security assessments of your classmates' designs to see who can find and fix the most security flaws.
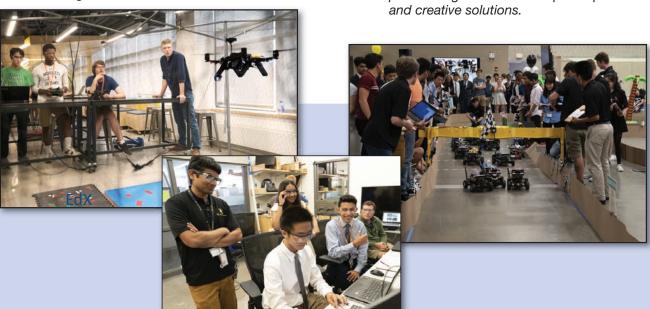
Medlytics: Data Science for Health & Medicine
Explore the intersection of data science and medicine to learn how machine learning and big data can help improve health and healthcare.

Designing for Assistive Technologies
We will tackle real problems faced by people living with disabilities, and learn to work together as a team, stepping through the engineering design process together to come up with personalized and creative solutions.

To get more information and to apply, visit:
https://beaverworks.ll.mit.edu/CMS/bw/BWSI
or email:
bwsi-admin@mit.edu

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- They are attending high school in US or US citizen abroad
- They have demonstrated technical ability (evidenced by recommendations from school officials, test scores, coursework, grades, and extracurricular activities)
- They have completed the lessons in the online tutorial for their desired project
- Online course starts January 2020 (prerequisite in order to apply to the on-site portion of the program)
- On-site BWSI runs July 6 – August 2, 2020

To get more information:
https://beaverworks.ll.mit.edu/CMS/bw/BWSI

Email:
bwsi-admin@mit.edu