

# **Impact of Industry Partnerships on Student Learning & Opportunities**

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## CISCO Partnership

Cisco — through the Silicon Valley Community Foundation — has provided a \$300,000 grant to build the College of Engineering and Computer Science capacity in IoT, or internet of things, curriculum and project experiences. As industry grapples with the influences of new technologies, this grant will help better prepare students for the workforce by exposing them to leading companies in the IoT space and providing hands-on learning opportunities.



**Computer  
Engineering  
IoT Based  
Design Projects**



**IoT Internship  
for Local  
High-School  
Students**

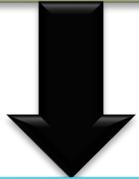


***Rapid  
Prototyping for  
IoT (EGCP 565)  
Summer Course***



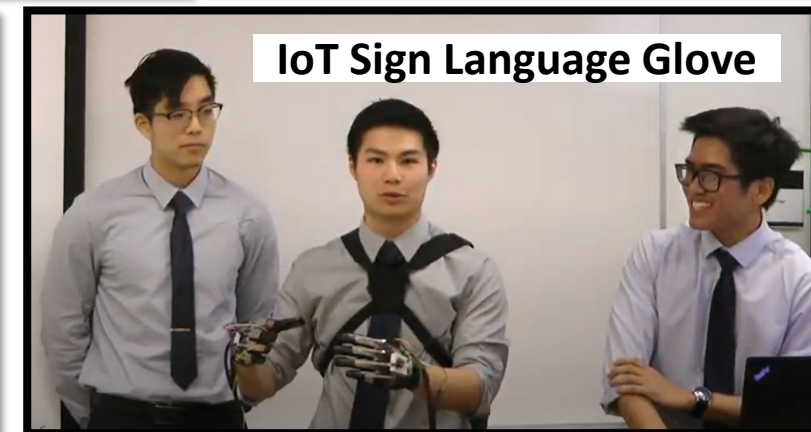
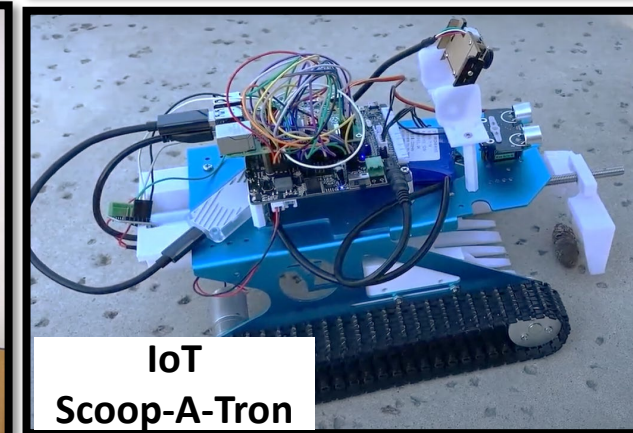
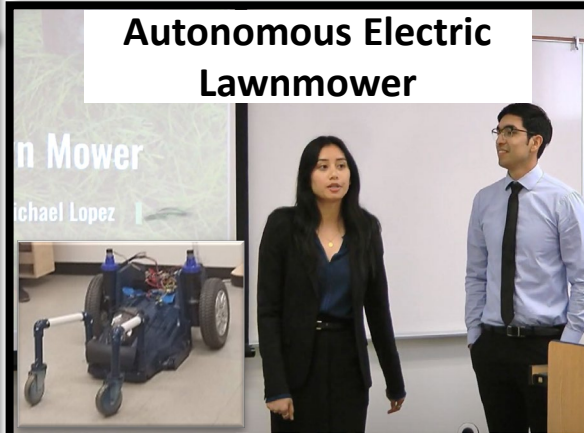
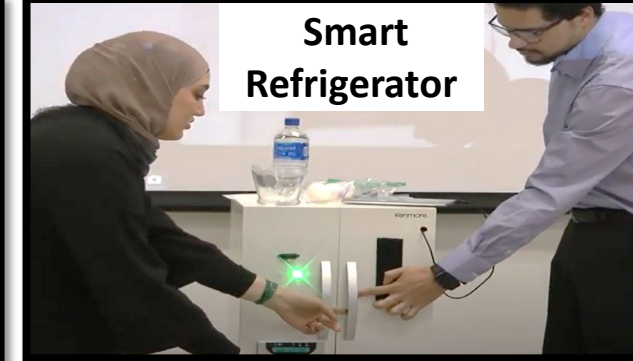
**IoT Based  
Research  
Projects**

# CISCO Partnership

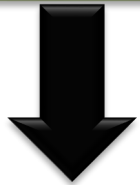
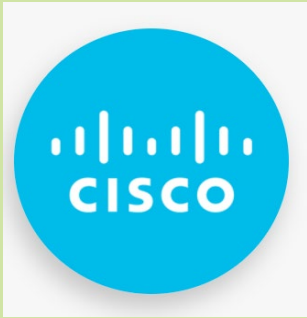


## Computer Engineering IoT Based Design Projects

43 Computer Engineering IoT Based Design Projects Were Funded (Students Impacted: 149)



# CISCO Partnership



***Rapid Prototyping for  
IoT (EGCP 565)  
Summer Course***

**31 IoT Based Projects  
Were Funded (Students  
Impacted: 119)**



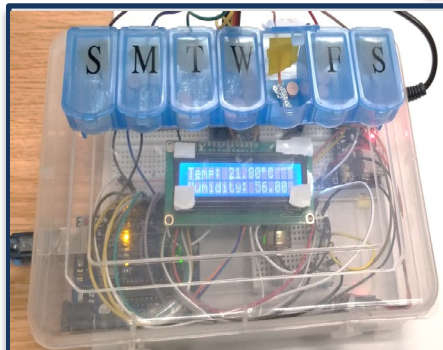
**Anti-Drink and  
Anti-Theft  
Mechanism**



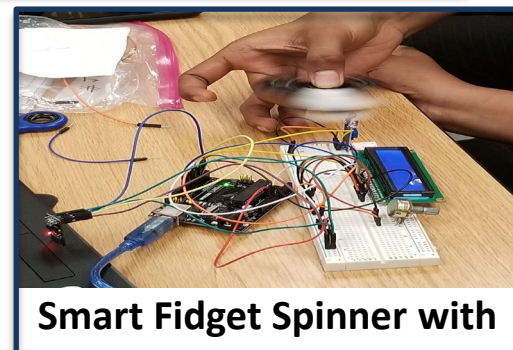
**Smart Crib**



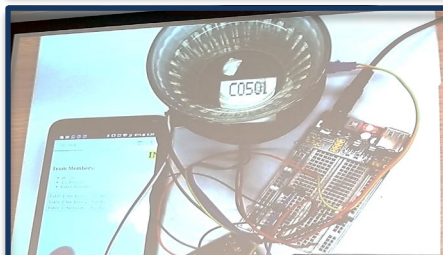
**Smart Mirror**



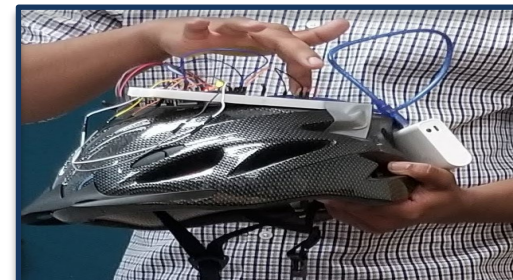
**Smart Pill Box**



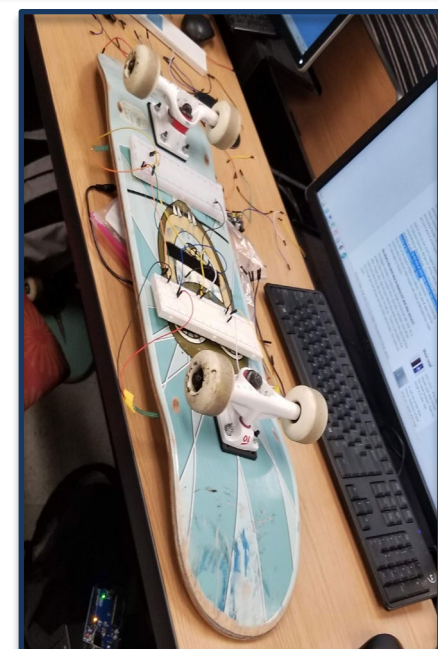
**Smart Fidget Spinner with  
Diagnostics**



**Smart Beer Mug with  
Messaging Capability**

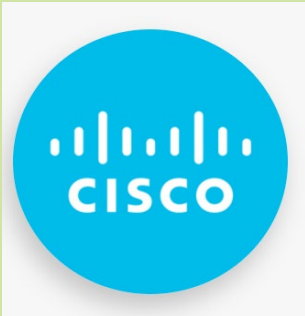


**Smart Helmet with  
Messaging Capability**



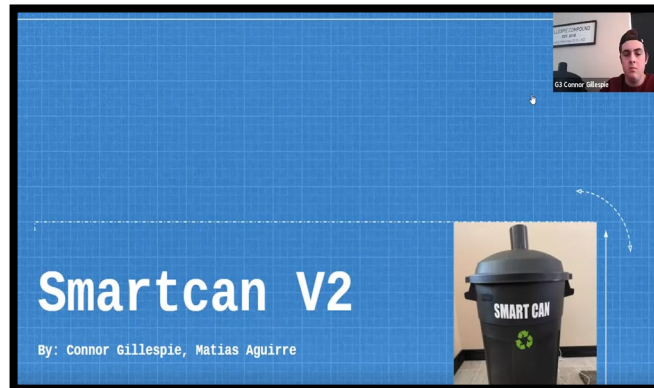
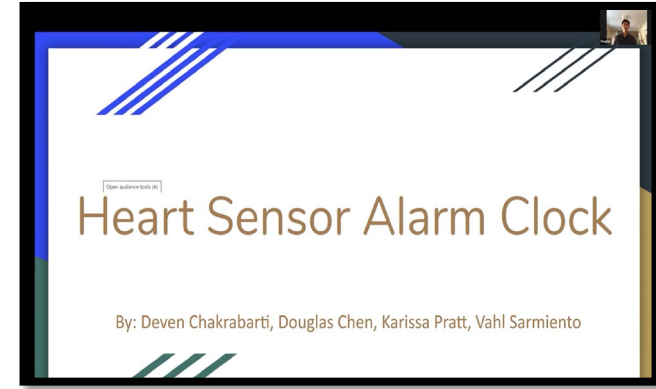
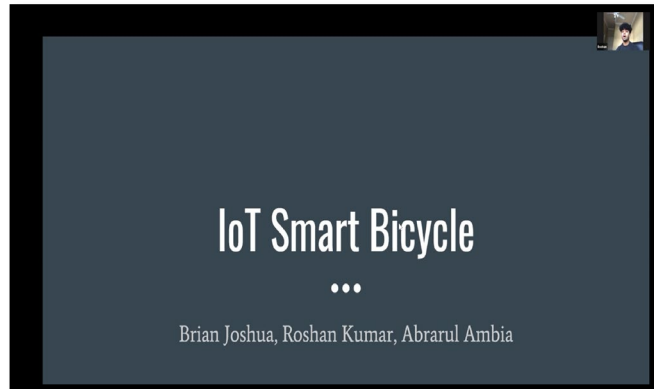
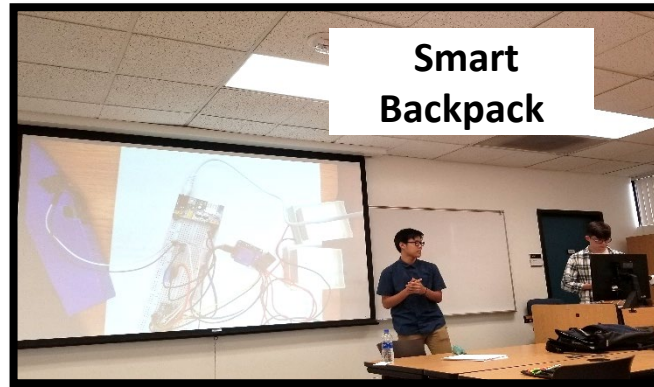
**Smart Skateboard  
with IoT Analytics**

# CISCO Partnership

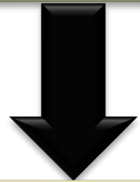


## IoT Internship for Local High-School Students

21 IoT Based Projects  
were Funded (Students  
Impacted: 64)



## CISCO Partnership



## IoT Based Research Projects

6 IoT Based Research Projects Were Funded (Students Impacted: 12)

- 8 IEEE Publications
- 6 Thesis
- 1 Graduate Project
- 5 Independent Studies

### Energy Harvesting from Wi-Fi

In Good Company: Future Engineers, Computer Scientists Harness Potential of Industry Partners

### IoT based Hydroponics

R. Parekh, U. Shah and **K. George**, "Experimental Study on 3D Fractal Base Antennas Design for Efficient Wi-Fi Energy Harvesting", *2021 IEEE Computing and Communication Workshop and Conference*.

M. Sreekanta, A. Sarode and **K. George**, "Error Detection Using Augmented Reality in the Subtractive Manufacturing Process," *2020 IEEE Computing and Communication Workshop and Conference*.

B. Shirke, J. Wong, J. Libut, **K. George** and S. Oh, "Brain-IoT Based Emotion Recognition System," *2020 IEEE Computing and Communication Workshop and Conference*.

J. H. Samawi, A. Govalkar, T. Tothong and **K. George**, "Morphing Quadcopters", *2020 IEEE Information Technology, Electronics and Mobile Communication Conference*.

R. Parekh, D. Luu, K. Jain and **K. George**, "Scavenging Residual Energy from Wi-Fi Sources Using a Rectenna Circuit," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

B. Shirke, J. Wong and **K. George**, "Acute Mental Stress Measurement using Brain-IoT System," *2019 IEEE International Conference on Cognitive Machine Intelligence*.

R. Parekh and **K. George**, "Fractal Base Antennas Effects on Wi-Fi Harvesting Technologies," *2019 IEEE International Conference on Cognitive Machine Intelligence*.

A. Zaheer and **K. George**, "Automated Dye-Sensitized Solar Cell Manufacturing System with IoT Monitoring," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.



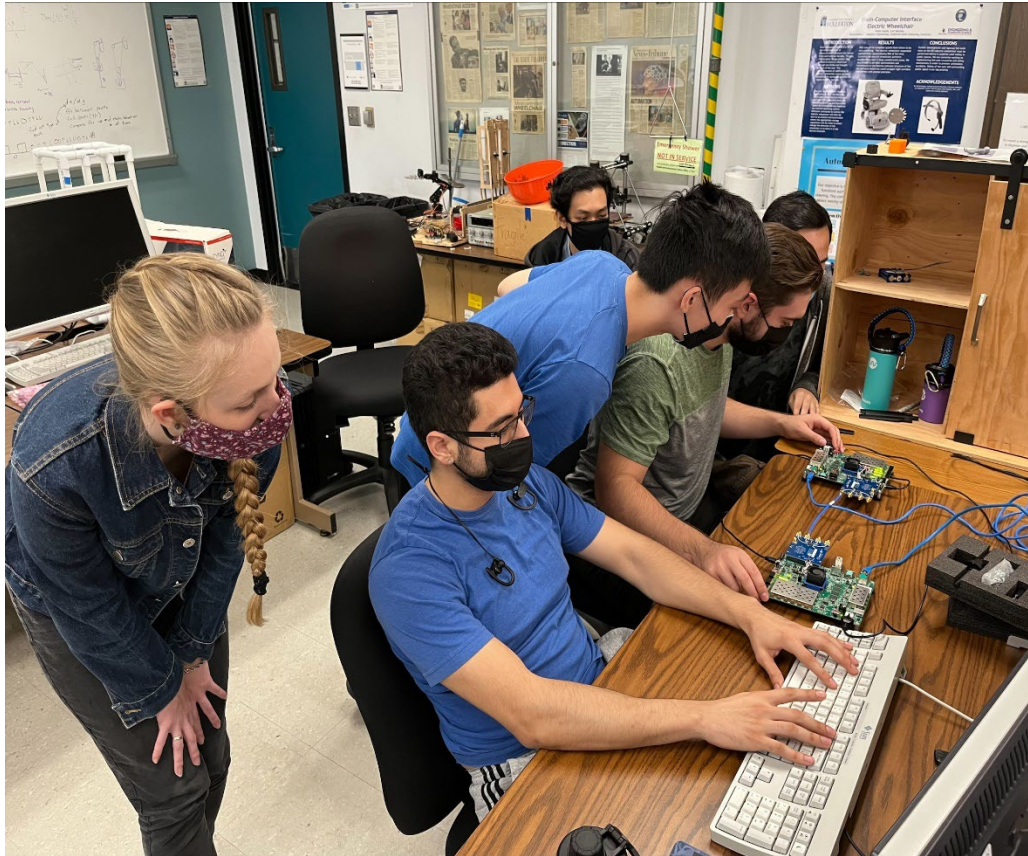
## Mercury Systems Inc. (2019-22)

Mercury Systems Inc. has donated a \$300,000 gift to support the “Intelligent Radar System” research project, directed by Kiran George, professor of computer engineering. This project will allow the College of Engineering and Computer Science to build out capacity in artificial intelligence, including developing curriculum, advancing research and engaging students in projects.

- **20 IEEE Publications (2019-23)**
- **8 Thesis**  
(Jaron Lin, Jordan Juliano, Alex Erdogan\*, Ameya Govalkar\*, Henry Lin\*, Tyler Groom\*, Kayla Lee\* & Cesar Martinez)
- **14 Independent Studies**  
(Ameya Govalkar, Cesar Martinez\*, Henry Lin, Tyler Groom, Kayla Lee, Illianna Izabal, Acacia Coddling, Nate Ruppert\*, Jake Miho, Vanessa Roque, Anthony Nguyen, Matthew Cesena & Ylicia Godinez )
- **Students Impacted: 16**
- **Students Employed by Mercury: Alex Erdogan, Tyler Groom, Henry Lin, Acacia Coddling, & Cesar Martinez**



\* Students who started working on the Mercury project as a sophomore, graduated with BS degree and the continued on the project as a graduate student

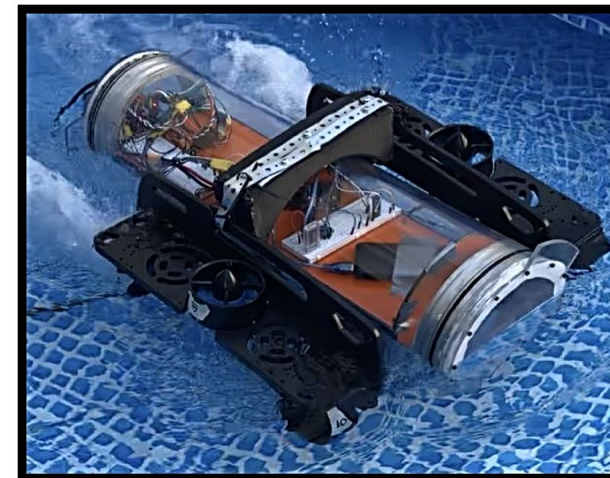






**RJE INTERNATIONAL**  
SPECIALIZING IN MISSION CRITICAL PRODUCTS

## Autonomous Underwater Vehicle



## Underwater Remotely Operated Vehicle

