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# Fulton Schools teams win 12 of 20 ASU Edson Student Entrepreneur Initiative Awards

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By

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Twelve of the 20 student-led startups chosen for Arizona State University's **Edson Student Entrepreneur Initiative** | <https://entrepreneurship.asu.edu/edson> for the 2016-2017 academic year are led by Fulton Schools students.

"The fact that more than half of this year's Edson awards are going to engineering students is indicative of the entrepreneurial mindset that has been activated within the Fulton Schools," says Brent Sebold.

Sebold who oversees the eSeed Challenge, the premiere venture development program for engineering students at ASU.

The success of engineering students in winning Edson awards "shows that our students not only have great ideas, but they have the guts to make them a reality and take the plunge into the challenging and messy realm of entrepreneurship," Sebold says.

Along with Scott Shrake, the director of the Engineering Projects in Community Service (EPICS) program, Sebold also co-directs Generator Labs, a 6,500-square-foot workspace for enterprising students who are being supported by both Edson and eSeed while transforming their ideas into startups.

The Edson Initiative offers 20 student teams a year up to \$20,000 each in seed funding, office space at SkySong, the Arizona State University Scottsdale Innovation Center, mentorship and training to advance their ventures. The teams will spend the next year in the intensive startup accelerator focused on helping the students execute their business models, deliver their products or services and create local jobs.

The 12 winning teams from the Fulton Schools are:

## **BISTEG**

**bistegusa.com** | <http://bistegusa.com>

The goal of BISTEG to make buildings better. BISTEG (Building Integrated Solar Thermal Electricity Generation) solar thermoelectric modules shade buildings to maximize energy efficiency while producing solar thermal energy to power them.

"We were inspired by the Arizona heat," says Kaitlin Vortherms, a civil engineering major. "Buildings are typically designed to keep heat out. However, we see an opportunity for infrastructure and buildings to utilize the heat instead of wasting it."

Thermoelectric generators are small, solid state devices that use a temperature differential to produce power and are the core of the product because of their adaptability and reliability.

"With the increased demand for renewable energy technologies, we recognized the opportunity to provide an attractive, building-integrated renewable technology that harnessed the heat of the sun," says Vortherms.

The team also consists of Payson Seager from the Del E. Webb School of Construction, Dylan Kerr from the Herberger School of Design & Arts, Ryan Kofron from the W.P. Carey School of Business and Andrew Park from the School of Electrical Computer and Energy Engineering.

### **Fusion Folder**

[fusionfolder.wix.com/fusionfolder](http://fusionfolder.wix.com/fusionfolder) | <http://fusionfolder.wix.com/fusionfolder>

The genius behind Fusion Folders is surprisingly simple: a folder that attaches to the back of a laptop and is used to store documents.

“It improves upon current storage methods because it allows you to store documents directly on your laptop without the hassle of carrying another folder with you,” says Jose Lopez III, an engineering management major.

The idea was born out of long study session at the ASU library, and the hassle of losing papers in the process of quickly running to class.

With the Edson award, the team plans to create a limited-liability corporation and begin the patent application process.

“After that our priority will be to improve on our current design and manufacture it at a low cost,” says Lopez.

The team also consists of engineering management student Ilianna Chavez and computer science student Sherwin Jose.

### **Hygiea**

[hygiea.tech](http://hygiea.tech) | <http://hygiea.tech>

Hygiea is a platform leveraging the Internet of Things which gathers data about the content and capacity of waste containers.

The data is then run through a powerful analytics engine that helps optimize collection routes and collection schedules, says Saiman Shetty, an electrical engineering graduate student, who notes the company’s overall vision is to improve efficiency in waste management to help prepare for the addition of one billion people to the world’s population.

“We can use historical data to predict population dynamics,” adds Shetty, Hygiea’s CEO. “We believe we can save the janitorial and waste management companies at least 30 percent of the costs they incur in these operations.”

Beyond simply cutting costs, Shetty wants to make waste management less wasteful.

“This is due to almost zero technological advent in this area,” asserts Shetty. “Specifically because there is no feedback from waste receptacles, and millions of janitors and waste trucks go around collecting air from waste bins. Despite having such a large task force at work, it is not uncommon to see overflowing waste bins and rising waste collection costs.”

Shetty plans to use the Edson award to take their prototype into production and run pilot programs, possibly with some San Francisco Bay Area organizations. They’re also exploring the possibility of teaming with local organizations in the Phoenix area for pilot opportunities.

Also on the Hygiea team are Parshad Patel, a robotics graduate student at Carnegie Mellon University, Pratik Vyas, a software engineering graduate student at San Jose State University and Krutika Rao, a computer engineering graduate student at ASU.

### **Knoze**

[zakhtab.wix.com/knoze](http://zakhtab.wix.com/knoze) | <http://zakhtab.wix.com/knoze>

Knoze is a note sharing and organizing platform aimed to improve the efficiency of studying for college courses. It brings hundreds of browser tabs and pages together in one place and displays them in a dynamic collage format.

“On top of that users can create private collages and share notes among their friends in a study group environment,” says team member Mohammed Munir, an electrical engineering student.

Now that they’ve earned Edson funding they plan to roll out their beta version in the spring semester, grow their server and look into legal consultations. They are also ready to launch their marketing campaign: “Knoze knows your notes.”

The team also includes computer science student Zarif Akhtab and chemical engineering student Sanketh Kamath.

### **MyDigital Backpack**

MyDigital Backpack is an educational platform for entrepreneurs and students to build projects, organize all the electronic material that comes with that process, and showcase that work to create a digital presence with global reach. It is quite literally, a personal, digital backpack.

“The purpose of MyDigital Backpack is to bridge visionaries to their legacies, while giving professors, mentors and potential employers a way to view your entrepreneurial journey,” says technology entrepreneurship and management student Irelynn Black.

“We live in such a digital world,” Black says. “Keeping the important material that is given to us electronically as students organized, is not just a task, but a skill. Some are better than others, but this affects our grades, and the learning process not just academically, but we take these characteristics with us as we become professionals.”

The team also consists of technological entrepreneurship and management students Ivan Abad, Kelly Dieball and Jessica Sarceda and W.P. Carey School of Business student Nick Lord.

## **Occupit**

Occupit is a company looking to capitalize on the growing virtual reality entertainment industry with the development of the first affordable motion simulator.

Since childhood, automotive systems engineering student James Coppinger has loved cars and motorcycles, which dovetailed neatly into his interest in video games. Even with a high-powered PC and a realistic steering wheel controller, Coppinger always found himself chasing a more true-to-life experience. Imagine his excitement when Oculus VR announced their flagship virtual reality headset, the Oculus Rift. Finally, Coppinger would be able to experience driving his dream car.

Unfortunately, Coppinger discovered his expectations were too high. He still had no feel for the car, and it wasn't the immersive experience he was looking for. He then turned his attention to motion simulators, mechanisms that encapsulate an individual and creates the illusion of movement. Paired with a VR headset, Coppinger imagined great potential for these devices.

“[The] problem was that they were all way too expensive,” says Coppinger. “They were typically priced between \$5,000 and \$15,000, and I knew I could make my own for under \$700.”

Enter Occupit, in which users sit over a ball joint and movement is simulated with four motors at each corner. These motors will provide linear actuation with a rack and pinion design, says Coppinger.

Coppinger now aims to realize the dreams of anyone who has ever wished to fly an F-16, drive a Bugatti Veyron or pilot a spaceship beyond our solar system by delivering a motion simulator for less than \$1,000. With his Edson award, Coppinger is focused on completing a functional prototype, as well as acquiring proper registration, patents and licenses. He also looks to fine tune his business model.

## **Speedy Castillo**

Speedy Castillo is a removable rim cover for road bikes to improve acceleration and performance on bicycles. Typical bicycle rims are not aerodynamic, due to the air that passes thru the empty space between the spokes causing the bicycle to slowdown.

Mechanical engineering student Luis Castillo's love of bicycles and speed helped inspire him to create the rims.

“I used to ride BMX bicycles when I was a child,” Castillo says. “Then I started to ride mountain bicycles with my dad every weekend for a couple of years. I started to use road bikes when I moved to Arizona and realized that this bicycle can go even faster with a couple of modifications, although those can be really expensive. I understood some basic aerodynamic concepts and how important this rim would be to increase acceleration on a bicycle.”

Castillo talked about bicycles with his mentor Aram Chomina-Chavez, a lecturer in the Fulton Schools Technological Entrepreneurship and Management program, and together they came up with the idea of a removable rim cover that would be a high-quality product that is practical and easy to use.

## **The Distinguished Gentleman's Club**

**tdgclub.com** | <http://tdgclub.com>

The Distinguished Gentleman's Club is a subscription box fashion service catering specifically to big and tall men.

Aron Mixson, a software engineering student, has always found himself shopping the “big and tall” section when it comes to clothes. But four years ago, realizing he was overweight, he decided to change both his appearance and mentality.

“What better way to do this than to lose weight and change my wardrobe? But the problem was that no matter the weight loss — 400 pounds down to 300 — I could not find clothes that fit,” he says.

After months of research, Mixson located a number of stores that could meet his styling needs. He soon then began personally styling fellow big and tall clients and the idea for the Distinguished Gentlemen’s Club was born.

“Our next step is a soft launch in the middle of October to test process and receive customer feedback,” says Mixson, who hopes to launch to the general public in early 2017.

Dually enrolled at Mesa Community College in addition to ASU, Mixson’s team consists of fellow MCC students such as Adilene Lizarraga, Thomas Heard, Harleen Rooprai, Angelica Amaya, Asia Johnson and Lezly Sandoval.

### **The Water Bearers**

The Water Bearers is a company established to improve the anti-icing process used in the aviation industry.

The Water Bearers was founded by Subbarao Raikar and Sneha Shenoy, both materials science and engineering graduate students. The pair were troubled by the number of aviation accidents caused by icing and resolved to find a better solution, according to Raikar.

Their work birthed Slayfrost, an anti-icing chemical Raikar hopes will be safer, faster, and more economical than existing anti-icing products. Raikar envisions the chemical applied to aircraft surfaces using existing spraying methods, but Slayfrost’s chemical properties will prohibit ice formation, ensuring a higher level of safety.

“In the light of the Edson award, we will work further on our product to perfect its properties as per the industry standards and patent the solution,” says Raikar. “We will also partner with airlines to observe their current anti-icing routines and obstacles they face, to improve properties of Slayfrost.”

### **Zero2One Diagnostics**

A point-of-care venture specializing in diagnostics, Zero2OneDiagnostics looks to stem the tide of antibiotic resistant bacterial infections, which cause upwards of two million hospitalizations and 23,000 deaths in the United States a year.

Currently, proper treatment and diagnosis of antibiotic-resistant bacterial infections rely on antibiotic-susceptibility tests, which can take anywhere from three to 14 days to produce results, according to Karan Syal, a biomedical engineering doctoral student.

“This long time-frame poses a mortal risk especially for septic and hospital-acquired infections patients,” says Syal.

In response, Syal under the mentorship of electrical engineering Professor Nongjian Tao, has developed a method to perform these antibiotic susceptibility tests using plasmonic imaging and tracking technology which can yield a result in just two hours, improving clinical diagnostics, reducing healthcare costs and saving lives.

Rounding out the Zero2One team are Venkat Ghanta, a W.P. Carey School of Business alumnus and Rafael Iriya, who is pursuing his doctoral degree in electrical engineering at ASU. The team currently conducts research in Tao’s lab. Along with Tao, the team credits Biodesign Institute researchers Shaopeng Wang and Shelley Haydel for the mentorship that has helped them develop their startup idea.

“The team is excited going forward to map the commercial pathway and head towards developing a full fledged product,” says Syal. “On the business side, the next few months will be spent in learning subtleties of regulatory, reimbursement and healthcare world[s]. On the other hand, the technology side will see the evolution of technology from a lab instrument to a commercial setup, along with setting up clinical best practices to determine susceptibility tests in less than two hours.”

### **Additional Fulton Schools Edson Award winners:**

#### **UnieHub**

UnieHub is a platform for university students to be able to be in contact with their community.

#### **Zingfo**

**zingfo.net** | <http://zingfo.net>

Zingfo provides event exhibitors with a broadcasting platform to increase leads and productivity.

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