SmartWorld Project

Our educational experience emphasizes hands-on Project Learning. Rather than instruct learners in theory and knowledge that might be useful to them someday, our student teams work with actual projects, simulations, or team activities that require them to solve problems, demonstrate critical thinking skills, and finally to deliver working prototypes or services as part of a team.

We believe this project-based approach not only prepares learners of all ages with the skills they need to secure better jobs, but that it's also engaging and fun. It attracts a more diverse set of people, many of whom are not interested to pursue a traditional STEM education.

All industries are technology oriented today, not just those that have been traditionally labelled as "tech". We want to enable everyone to be confident in their abilities to put technology to work in their personal and professional lives. This will be particularly important with the rise of Artificial Intelligence and IoT machine-to-machine learning, which will change many aspects of industry and our personal lives. We want to train a generation of people to know how to put technology to work for them, and not to be replaced by it.

Many of our students teams go from the classroom to working with industry and government sponsors to implement real projects. Here's just a few of the current ones.

The City of Campbell, California is sponsoring several city blocks that will be used as a showcase for Intelligent Lighting. Student teams work under the direction of their talented instructors and city management officials to create, install, and manage advanced lighting systems that will save significant amounts of energy, increase safety, and adapt to the local environment. These intelligent lighting systems will adapt to traffic, weather, and even emergency situations. Our Intelligent Lighting IoT class teaches students how to design and manage these systems, and to see them in action.

Integrated Device Technology of San Jose California is sponsoring the same intelligent lighting approach at their main campus in San Jose, as well as in Penang Malaysia. In this controlled setting, student teams anywhere the world can sense local or remote environmental conditions, and experiment with how artificially intelligent lighting systems can adapt to and improve living conditions. The government of Penang is sponsoring a much broader experiment with smart street lighting that will begin in 2020 and leverage this same technology.

Our Environmental Sensing IoT course has student teams create working environmental sensors for a variety of applications, such as clean water & air, location services, personal health, and mobility. These Internet-of-Things devices are then provisioned on the Internet, and viewable from anywhere in the world. We will add this type of web visibility to our main website or public displays in the future.

In early 2020, we will announce our first global expansion of Microfacturing Institutes and the SmartWorld program. This will provide our learners with a global perspective, and global student teams will interact with each other to learn how to be effective and productive in a global economy.

As our program expands into more locations, the SmartWorld project will grow and grow. In each location, we bring three main elements: highly relevant project-based education, industry sponsors, and government or local civic groups. The result is that learners of all ages have the opportunity to put their newly acquired skills into real products and services, which helps the communities that they live in. We expect that many of these projects will turn into new jobs or new companies of their own over time.

One element of helping to sponsor a Smartworld project for established educators or professionals is that it's fun! There's a great deal of learning that happens with real-life implementation, and the mentorship of student teams can leave a lasting positive impact.

Stay tuned for more later this year.

Gregory Waters
Founder, Microfacturing Institutes