



[VantTec](#), a student team specializing in **unmanned autonomous vehicles** on the Tec's Monterrey campus, has developed a **drone** that can make **aerial deliveries**.

In partnership with the Rocket Pizza Company, the group got started in March by making **thirteen deliveries of 800-gram pizzas** within a radius of **110 meters**, via **autonomous and remote-controlled** flights.

This was achieved through "Alexa," a **hexacopter drone** with **six motors**, double batteries, and 3D-printed parts that can carry **up to one kilo**.

*"This project started **about a year and a half ago**. The partnership began because the pizza restaurant was interested in making a change to their business.*

*"They told us a little about what they wanted to do, and we gradually started **scaling up** (the drone)," said Ariadna Medina, a student and co-leader of the project.*

"Alexa" forms part of VantTec's **SWARM & UAV** project, which focuses on developing **autonomous drone solutions**, for both **deliveries** and technology **competitions**.

The team is currently working on different initiatives, which include an **autonomous submarine** and a **100% electrical vehicle**, to name but two.

“My personal growth is thanks to the team, thanks to what I’ve learned and shared with my teammates.” - Alejandro Said

Innovating with “Alexa” drone

In **2024**, VantTec began to develop a drone capable of making **deliveries**, which started out with **four rotors**. As the project advanced, they designed a **six-rotor** vehicle.

*“Basically, we have two layers: one on the bottom and another on top. We designed both and **3D** printed them.*

*“It has **telecommunications antennas**, a **GPS** antenna, **telemetry antennas**, and **motors** for direct control of the drone,” shared mechanical designer Luis Ramos.*

Participating in the project were **students** Ariadna Medina, Daniel Salinas, Alejandro Said, Luis Ramos, Emiliano Méndez, Bismarck Animas, Neil Hernández, Iván Roberto Estrada, Diego Armando Fondón, and Mariana Diaz.

The “Alexa” hexacopter drone weighs **2.4 kilos**.

Developing skills in VantTec

Besides **learning the technical aspects**, the students stress that **VantTec** has helped them develop **skills** which have contributed to their **professional growth**.

*“I didn’t know much when I joined (VantTec). I joined as a project manager and much of my personal growth is thanks to the team, thanks to what I’ve learned and shared with my **teammates**,” said Alejandro Said.*

Daniel Salinas highlights how he has learned about different tools and technological projects that **benefit the community** in the student team.

*“I’m very satisfied that we could demonstrate how we can get things done in **Mexico**. I’m very **happy** that we’re implementing technology projects,”* said Salinas.



About VantTec

Student group VantTec (for Tec Unmanned Autonomous Vehicles in Spanish) came into being in **2017** on the **Tec’s Monterrey campus**.

It is dedicated to the **design and construction** of autonomous vehicles such as drones, a boat, and a submarine.

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