Antonio López Guzmán
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EDUCATION

University of Texas at Austin   **August 2022-Present**
Master of Science in Aerospace Engineering

Universidad Nacional Autónoma de México (UNAM), México   **June 2022**
Bachelor of Science in Mechatronics Engineering
GPA: 9.34/10
- Thesis: Power subsystem for a TubeSat nanosatellite using TrisolX solar cells arrays
- Honorific Mention

RELEVANT COURSES: Artificial Intelligence, Robotics, Advanced Control, Advanced coding techniques.

RESEARCH EXPERIENCE

KuauhtliSat TubeSat, Advanced Technology Unit, UNAM   **March 2021- June 2022**

- Simulate the mission of the nanosatellite to determine the amount of power harvested.
- Design the regulation and control systems to maximize the power.
- Embedded systems for space applications.
- Manufacture space-quality solar panels.

K'OTO CubeSat, Advanced Technology Unit, UNAM   **February 2021- June 2022**

- Created printed circuit boards for the telemetry of the nanosatellite as a member of the TT&C system and perform tests on the electronic components.
- Collaborated with the attitude and determination control system.

LEADERSHIP EXPERIENCE AND INVOLVEMENT

Avionics System for Student Team "UNAM SAE Aero Design"   **Feb 2019- March 2021**
Leader
- Managed a group of 14 students, organized tasks weekly and delivered monthly reports.
- Supervised the design and implementation of the propulsion, telemetry and control systems of an unmanned aerial vehicle.
- Built a small glider and developed an automatic pilot to control it.

Robert Bosch México, México   **Feb 2019-Jun 2019**
Scholar
- Created a monitoring system for a conveyor band in a mining company
- Presented the monitoring system to Bosch's staff

Mathematical Olympiads   2018-Present
Tutor
- Co-founder of "MathSavvy", online site for courses and classes of mathematics.
- Volunteer professor of advanced math for international competitions.

SOFTWARE

- MATLAB/Simulink
- Julia
- Python
- Git
- Gazebo
- C#

- STK
- Altium Designer
- Proteus, Arduino
- AutoCAD, Inventor
- Excel

CONFERENCES AND PRESENTATIONS

Power subsystem of KuathliSat using TrisolX solar cells arrays   **September, 2022**
International Astronautic Conference (IAC) | Paris, France

Avionics System for the control of an unmanned aerial vehicle   **November 2020**
7th Symposium of Robotics | Mexico City, Mexico

Presentation of TITAN, an unmanned aerial vehicle   **September 2019**
Mexico's Aerospace SummiT | Querétaro, Mexico

Presentation of CANEK, an unmanned aerial vehicle   **April 2019**
Mexican Aerospace Fair | Mexico City, Mexico

HONORS AND AWARDS

- Fulbright Student Scholarship   **June 2021**
- SAE Aero Design East, 2nd place, Overall   **Lakeland, USA March 2021**
- SAE Aero Design Mexico, 3rd place, Overall   **Monterrey, Mex. October 2020**
- Robert Bosch Mexico Scholarship   **February 2018**
- Silver Medal, International Mathematical Olympiad   **Hong Kong, July 2016**
- Gold Medal, IberoAmerican Mathematical Olympiad   **Puerto Rico, November 2015**

LANGUAGES

- English (104/120 TOEFL IBT)
- Spanish (native speaker)