Josue Aldana-Aguilar

Github Linkedin

Residence: San Salvador, El Salvador

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Place of birth: San Salvador, El Salvador ✻ *Date of birth:* 23-05-1999

Education

Bachelor's degree in Electrical Engineering — *Don Bosco University*
Bachelor's degree program — *2019 - 2023*
Final grade: 8,5/10,0
Thesis grade: 9.7/10.0
Capstone project: Design and Simulation of a COTS-Based Electrical Power System for HABs

Technical Diploma in Electronics Engineering — *Don Bosco University*
Technical Engineering Program — *2017 - 2018*
Final grade: 8,7/10,0
Hands-on experience in automation and electronics through multiple course-related projects.

Conferences and Workshops

Joint ICTP-IAEA School on Systems-on-Chip Based on FPGA for Scientific Instrumentation and Reconfigurable Computing
The Abdus Salam International Centre for Theorical Physics. — *2023*
Trieste, Italy

Estimation of Shade Levels in Coffee Cultivation Using Segmentation Methods and Deep Learning
IEEE 41st Central America and Panama Convention. — *2023*
Tegucigalpa, Honduras

Design and Simulation of a COTS-Based Electrical Power System for HABs
1st Central America Space Congress. — *2023*
San José, Costa Rica

A Comprehensive Guide to Testing and Selecting 18650 Batteries for HAB Missions
IEEE Students 40th Central America and Panama Convention. — *2023*
Guatemala, Guatemala

Selection of UHF Antennas for a Near-Space Mission on a HAB and Regulated Freq.
IEEE Students 39th Central America and Panama Convention. — *2022*
San Salvador, El Salvador

Projects

Micro-Macro Observatory (MMO) — *2024*
Electronic and software Engineer — *San Salvador, El Salvador*

- Designing electronic and software systems for a 1U CubeSat mission.

Micro-Macro Observatory (MMO) — *2022 - 2023*
Electrical Engineering intern — *San Salvador, El Salvador*

- Research in high-altitude balloon missions for near-space exploration.
- Gained practical understanding of NASA's project lifecycle in system development.
- Developed an Electrical Power System for HABs using open-source software and COTS electronics.

Technical skills

Programming Languages/Tools	Python, C++, C, LaTeX, Git & GitHub, Matlab, Labview, Eagle, Multisim, LTspice.

Teaching Roles

Olympic Astronomy Group	Instructor in Physics and Mathematics, focusing on fundamentals for astronomy and astronautics students.
ACE402	Instructor for Technical Diploma on Electrical Engineering students, specializing in fundamental electrical circuit concepts.

Extracurricular Activities

Astronomy Enthusiast	Active member of the University's Astronomy Students' Association. Participates in astronomy camps and enjoys engaging in public science outreach activities.
Non-Fiction Reader	Avid reader with a keen interest in non-fiction literature, focusing on science, history, and personal development.
Music Aficionado	Enthusiastic about diverse music genres, regularly exploring and appreciating new and classical music collections.

Language Proficiencies

English	Proficiency at B2 level.
Spanish	Native / Bilingual Proficiency .

Memberships

IEEE	Active member in the Institute of Electrical and Electronics Engineers, with involvement in the Aerospace and Electronic Systems Society (AESS) and Electron Devices Society (EDS) chapters.

Referees

PhD. Jesus Gonzalez
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PhD. Yakdiel Rodriguez-Gallo
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Micro-Macro Observatory