Melkyn Quintana

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Professional Profile

I am a senior astronomy student with strong mathematics, physics, statistics, data analysis, and Python programming skills. Through my studies, I have acquired great learning and problem-solving skills, which allow me to adapt easily to new work and collaboration environments.

Work Experience

3D Image Annotator *January 2025 - May 2025*
CloudFactory

- Roof annotation and rendering using Nearmap 3D models created with satellite imagery

Freelancer *December 2024 - Actual*
Outlier

- Participation in code-solving projects for LLM training and voice recording projects

Education

B. Sc. in Astronomy *2019 – Actual*
University of Antioquia

- **Courses:** Computational Methods, Modern cosmology, Modern astrophysics, Stellar astrophysics, Galactic and extragalactic astrophysics, Celestial mechanics, Astro-statistics, Quantum Mechanics, Relativity and Gravitation.

Technician in Industrial Instrumentation *2017 – 2018*
Servicio Nacional de Aprendizaje (SENA)

Technical High School with emphasis on electronics *2013 – 2018*
Technic and Industrial Institute Rafael Reyes

Additional Education

12th AstroTwinCoLo 2024 *November 2024*
University of Antioquia - Medellín (Colombia)

Lectures and hands-on applications on *'weak gravitational lensing technique and its astrophysical and cosmological applications'* by PhD Divya Rana.

1st Fargo3D Workshop *January 2024*
Adolfo Ibañez University - Santiago de Chile (Chile)

Workshop focusing on the use of Fargo3D software and its integration with RADMC-3D software.

11th AstroTwinCoLo 2023 *November 2023*
University of Antioquia - Medellín (Colombia)

Lectures and hands-on applications on *'cosmology, large-scale structure, and simulations'* with SWIFT code by PhD Matthieu Schaller.

10th AstroTwinCoLo 2022 *December 2022*
University of Antioquia - Medellín (Colombia)

Lectures and hands-on applications on *'planet formation with the ALMA telescope'* and CASA software by PhD Nienke van der Marel and *'the long impact-tail of astronomical research'* by PhD Pedro Russo.

Tech Skills

Operating Systems: GNU/Linux, Windows

Programming Languages: Python, C, Bash, SQL, ssh

Software: Github, LaTeX, Iraf

Tools: Numeric methods, N-Body Simulations, Monte Carlo methods, emcee, Big Data analysis, pandas, TensorFlow.

Languages

Spanish Native Speaker

English Fluent (B2 - B2+)

Courses and Certificates

BOOTCAMP TALENTO TECH - DATA ANALYSIS ADVANCED LEVEL *2025*
Ministry of Information and Communications Technology of Colombia / UI Training

DATA - DRIVEN ASTRONOMY *2022*
Coursera / University of Sydney

SPECIALIZED PROGRAM - PYTHON FOR EVERYBODY *2022*
Coursera / University of Michigan

This specialized program is composed of 5 courses:

- Programming for Everybody (Getting Started with Python)
- Python Data Structures
- Using Python to Access Web Data
- Using Databases with Python
- Capstone: Retrieving, Processing, and Visualizing Data with Python

INTRODUCTION TO PYTHON PROGRAMMING *2022*
Coursera / University of Pennsylvania

DATA ANALYSIS USING PYTHON *2022*
Coursera / University of Pennsylvania

Participation in events

(Poster presentation) **Analyzing variability in the Hubble constant from Type Ia Supernova data concerning the Hubble tension.** *November 2024*
VII Colombian Congress of Astronomy and Astrophysics, Bucaramanga, Colombia