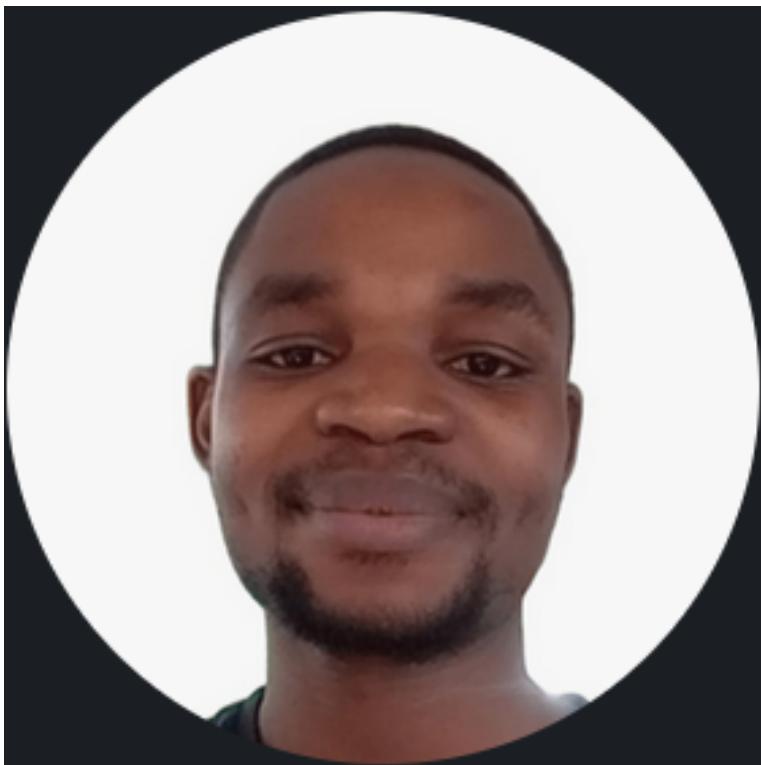


## About Me



Alex Monito Nhancololo

### **Ph.D. student in Statistics and Probability**

A. M. Nhancololo is a Ph.D. student in Statistics and Probability at the Institute of Mathematics, Statistics and Computer Science, University of São Paulo (IME-USP). He holds an M.Sc. in Statistics and Agricultural Experimentation from the Federal University of Lavras (UFLA), where he received the Best Thesis Award (2024), and a Bachelor of Education in Mathematics with a specialization in Statistics from Universidade Save (Mozambique). He is also pursuing an M.Sc. in Financial Engineering at WorldQuant University and an MBA in Artificial Intelligence and Big Data at the Institute of Mathematical and Computer Sciences, University of São Paulo (ICMC-USP). He was awarded third place in the Spatial AI Challenge 2024 (I-GUIDE), together with Julian Huang and Yue Lin (University of Chicago). His primary research interests lie in spatio-temporal statistics and their applications to the social sciences, environmental studies, ecology, agriculture, and medicine. Methodologically, his work focuses on geospatial intelligence (GeoAI), machine learning, natural language processing, and deep learning, alongside spatial point processes, lattice/area data, geostatistics, and time-series analysis.

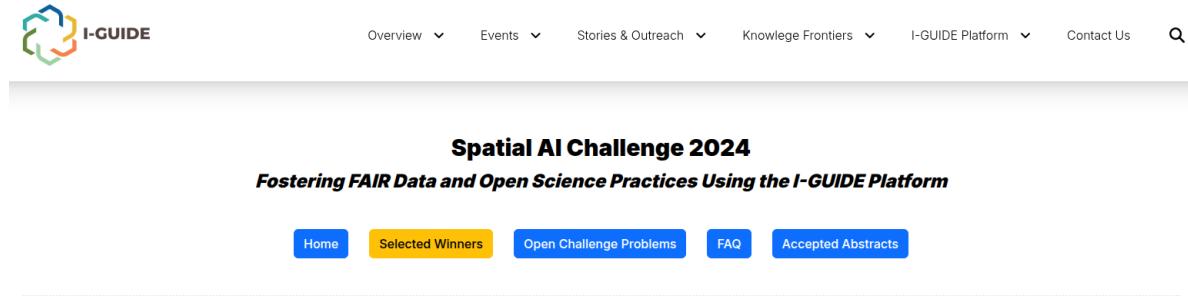
[Download CV](#)

## Honors & Awards

2025 · I-GUIDE

### Spatial AI Challenge 2024

Awarded third place in the Spatial AI Challenge 2024 (I-GUIDE), together with Julian Huang and Yue Lin (University of Chicago).



The screenshot shows the I-GUIDE website with the Spatial AI Challenge 2024 page. The top navigation bar includes links for Overview, Events, Stories & Outreach, Knowledge Frontiers, I-GUIDE Platform, Contact Us, and a search icon. Below the navigation is a banner for the challenge. A sub-navigation bar below the banner includes Home, Selected Winners (which is highlighted in yellow), Open Challenge Problems, FAQ, and Accepted Abstracts.

### Welcome to the Spatial AI Challenge 2024

The Spatial AI Challenge 2024 is an international initiative at the crossroads of geospatial science and artificial intelligence. Hosted on the cutting-edge I-GUIDE Platform, this challenge brings together researchers, data scientists, AI enthusiasts, and geospatial professionals to develop innovative, responsible, and reproducible solutions for some of today's most pressing sustainability challenges.

#### Winners of the Spatial AI Challenge 2024

We are proud to recognize the top teams whose submissions stood out for their innovation, technical rigor, and commitment to open science. After a competitive review process, the following projects have been selected as this year's winners:

##### 🥇 Winner

[GeoMapCLIP](#)

**Team:** Purdue RCAC

**Team members:** Jungha Woo, Elham Jebalbarezi Sarbijan — *Purdue Research Computing*

**Summary:**

This project developed *GeoMapCLIP*, a fine-tuned extension of GeoCLIP, to automatically localize unknown geospatial images using visual cues. Judges praised its well-structured, reproducible notebook, engaging storytelling, and generalizability across domains like agriculture, hydrology, and historical mapping.

##### 🥈 Second Place

[Wildfire Threat Detection for Transportation Infrastructure using U-Net for Semantic Segmentation](#)

**Team:** CNA Corporation

**Team members:** John Crissman, Joel Diaz, Angie De Groot, Jeremiah Huggins, Lars Hanson, Steven Habicht, Matthew Prebble, Shaun Williams, Carey Whitehair-Conde, Rebekah Yang — *CNA Corporation*

**Summary:**

This submission presented a compelling approach to identifying wildfire risk for critical infrastructure using deep learning and open data. It leveraged a U-Net-based pipeline and performed well in data readiness, FAIR practices, and applicability to real-world emergency response planning.

##### 🥉 Third Place

[Pipeline for Roof Material and Geometry Classification](#)

**Team:** Roof Mapper

**Team members:** Julian Huang, Yue Lin — *University of Chicago*; Alex Monito Nhancolo — *University of São Paulo*

**Summary:**

Focusing on disaster resilience, this project used satellite imagery and OSM data to classify roof materials across urban environments. Reviewers appreciated its real-world applicability, integration of open tools, and clear documentation.

2025 · UFLA

## **2024 Best Master's Thesis Award in Statistics**

Award for the Best Master's Thesis in Statistics, defended in 2024

Advisor: Prof. João Domingos Scalon



2025 · WordQuant University

## **Foundations of Financial Engineering**

Foundations of Financial Engineering (FFE) Certificate, distinction ( $\geq 80\%$  average).

- Applied linear algebra and Python for filtering, summarizing, and transforming structured and unstructured financial data
- Prepared datasets for econometrics, machine learning, and deep learning models
- Conducted quantitative analysis of financial risks including credit risk, volatility, and liquidity

CERTIFICATE OF COMPLETION

# Foundations of Financial Engineering

This certification of eight graduate credits is awarded to

Alex Monito Nhancololo

by WorldQuant University

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Issued on this day,

Feb 12, 2025



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GOVERNO DA PROVÍNCIA DE INHAMBARANE

DISTRITO DE INHARRIME

ESCOLA SECUNDARIA 09 DE MAIO DE INHARRIME

DIPLOMA DE HONRA

Este diploma constitui um reconhecimento ao aluno Alex Monito Nhancolo, pela  
mérito na desempenha das actividades, durante a cursa de agricultura, tendo se  
destacado como o melhor estudante, com a classificação de 18 valores



Director

  
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