MANUEL JOSUE MALLA CAMPOVERDE

Machala, Ecuador ◇ mmalla1@utmachala.edu.ec ◇ LinkedIn ◇ +593 979 489 503 ◇ Web page

EDUCATION

B.Sc. Information Technology *2022 - 2027*

Universidad Técnica de Machala *Machala, Ecuador*

Relevant courses: Programming fundamentals, Object Oriented Programming, Data structures, Databases fundamentals, Operating Systems, Advanced programming, Information Security, Software Engineer, Linear Algebra, Mathematical Analysis, Numeric Methods, Probability and Statics, Hardware platforms, Analog Electronics, Digital systems & Internet of things

Summer Program *Semester 2024-II*

FGV Applied Mathematics School *Rio de Janeiro, Brazil*

Relevant Courses: The Machine Learning behind recommendation systems, Optimization methods in Julia, Complex networks applied in Epidemiology & Applied Bayesian Regression.

WORK EXPERIENCE

Software Developer Intern October. 2024 - February 2025

Universidad Técnica de Machala, IT Department *Machala, Ecuador*

- Architecture Design of Intelligent Control Access and Security System (SISCA) for classrooms of Universidad Técnica de Machala Main Campus Faculties.
- Design of the mobile application used by Professors for classroom access.
- Optimized computational efficiency in real-time facial authentication using Artificial Intelligence.

Machine Learning Intern May. 2025 - Present

LarvIA *Machala, Ecuador*

- Development of Machine Learning models applied to improve shrimp farm industry process in Ecuador and Latin America.
- Development of instance segmentation models using YOLOv11.
- Applied photogrammetry techniques using OpenCV, in order to measure of objects using cellphone photos.

OTHER PROJECTS

- **MangroveNet: Mapping and Monitoring mangrove ecosystems based on U^2-Net model using satellite images. (2024)**
  - Developed a deep learning model based on U2-Net for mangrove segmentation using satellite imagery (Landsat 7, 8 & Sentinel-2).
  - Implemented spectral indices (NDVI, NDWI, NDMI, MNDWI) to enhance classification accuracy.
  - Preprocessed satellite data, removing noise (clouds, shadows) using CFMASK.
  - Optimized U2-Net for multispectral segmentation with RGB, NIR, SWIR-1, and SWIR-2 bands.

VOLUNTEERING

Microsoft Learn Student Ambassador January 2024 - Present

Microsoft

Student Ambassadors are a global group of campus leaders who are eager to help fellow students, create robust tech communities and develop technical and career skills for the future.

- Learning about modern technologies used by Microsoft in the current state of the industry.
- Learning how to use and develop Artificial Intelligence services using Azure for building innovative projects.
- Host events such as workshops and hands-on labs in order to teach how to make Machine Learning Models

AWARDS & HONORS

- **Participation grant (TaReCDa/ReWARDS, Machala, Ecuador, 2023):** Selected to participate in Second Regional Workshop on Data Science Applications and Research with full grant.
- **Selected Research Proposal (TaReCDa/ReWARDS, Machala, Ecuador, 2023):** One of the ten teams selected to present a research proposal titled "Use of computer vision and convolutional neural networks for the detection and classification of critical areas for reforestation in mangrove ecosystems".
- **Selected Extended Abstract (LatinX in CV CVPR 2024, Seattle, USA):** Selected Extended Abstract titled "Mapping and Monitoring mangrove ecosystems based on U^2-Net model using satellite images" to be presented in LatinX in Computer Vision Workshop in the Computer Vision and Pattern Recognition conference 2024.
- **Best presentation (LatinX in CV CVPR 2024, Seattle, USA):** Best presentation award in the undergraduate consortium track at the LatinX in Computer Vision Workshop in the Computer Vision and Pattern Recognition conference 2024.
- **Travel and registration Scholarship (Computer Vision Foundation, Seattle, USA, 2024):** Travel and registration grant to participate in person in the Computer Vision and Pattern Recognition conference 2024.
- **1st Place in UTMACH Challenge (Universidad Técnica de Machala, Machala, Ecuador, 2024):** Winning team with project proposal named Intelligent Security and Control Access System (SISCA) for benefiting the university infrastructure.
- **1st Place in Fall AI Project Competition (MLSA, 2024):** Winning team with project named "Wild-land Fire Azure AI" for Fall AI Projects competition of Microsoft Learn Student Ambassadors.
- **Travel and Accommodation Scholarship (FGV EMAp, Rio de Janeiro, Brazil, 2025):** Travel and accommodation grant to participate in FGV School of Applied Mathematics Summer Program.
- **Participation Scholarship (KHIPU 2025, Santiago, Chile):** Accepted to participate in the KHIPU Latin American Meeting in Artificial Intelligence 2025 Conference in Pontificie Universidad Católica de Chile.

TECHNICAL SKILLS

Programming	Python, Java, JavaScript, TypeScript, C#, SQL, Julia, C
Python Libraries	Tensorflow, Pytorch, Sci-kit Learn, Pandas, Matplotlib, Jax
Frameworks	Django, NodeJs, ReactJs, AngularJs, Spring Boot, FastAPI, .NET
Databases	MySQL, PostgreSQL, SQL Server, MongoDB, Redis
Software	Linux terminal, Git/GitHub/GitLab, Jupyter Notebooks, Azure
Mobile Development	Android Studio, Kotlin
Software Development	Html, CSS, Htmx.
IT Tools	Docker, Kubernets, Jenkins, GitLab Integrations, Azure DevOps
Languages	English-C1, Portuguese-A2, Spanish-Native