

MANUEL JOSUE MALLA CAMPOVERDE

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EDUCATION

B.Sc. Information Technology

Universidad Técnica de Machala

2022 - 2027

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

FGV Applied Mathematics School

Semester 2024-II

Rio de Janeiro, Brazil

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

Data Driven Decision Specialist

Escuela Superior Politecnica del Litoral

August 2025 - March 2026

Guayaquil, Ecuador

Relevant Courses: Excel for Data Analytics, SQL and query optimization, Python for Data Analytics, Business Intelligence, Data Visualization & Gen AI for Data Analytics.

WORK EXPERIENCE

Software Developer Intern

Universidad Técnica de Machala, IT Department

October. 2024 - February 2025

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.

Junior Full-Stack Developer

Freelance

February. 2025 - May 2025

Machala, Ecuador

- Development of businesses administrative dashboard using NextJs and authentication with Azure AD.
- Development of backend system including CRUD using PostgresSQL, NestJs and TypeORM with migrations.
- Implemented interactive whatsapp chatbot for booking businesses meetings using OpenAI API and meta builder bot library.

Machine Learning Engineer - Intern

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May. 2025 - Present

Machala, Ecuador

- Development of Machine Learning models applied to improve shrimp farm industry processes in Ecuador and Latin America.
- Development of instance segmentation models using YOLOv8.
- Applied photogrammetry techniques using OpenCV, in order to measure of objects using cellphone photos.

OTHER PROJECTS

- **MangroveNet: Mapping and Monitoring mangrove ecosystems based on U²-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). Preprocessed satellite data, removing noise (clouds, shadows) using CFMASK. Optimized U2-Net for multispectral segmentation with RGB, NIR, SWIR-1, and SWIR-2 bands.

- **Geoclustering of homicides in Ecuador: A comparative analysis with KMeans, DBSCAN, and HDBSCAN. (2025)**

Conducted a research using homicides government data in order to identify certain location clusters or groups where the phenomenon of homicides is spreading with a certain density and following similar patterns.

VOLUNTEERING

- **Microsoft Learn Student Ambassador** — Microsoft (Jan 2024–Present)
Promote tech communities and peer learning through workshops on AI and data science.
- **Volunteer Staff** — PhawAI (Jul 2025–Present)
Support Latin American AI initiatives and community engagement in science and technology.
- **Volunteer Staff** — Somos NLP (May 2025)
Contributed to staff activities of Somos NLP challenge.
- **Python Fundamentals Teacher** — Municipio de Huaquillas (Mar–Apr 2025)
Taught Python programming to young students to foster digital skills in local communities.
- **Outgoing Global Volunteers Team Member** — AIESEC in Ecuador (Feb–Jun 2024)
Supported recruitment and coordination of volunteers for SDG-related international projects.

AWARDS & HONORS

- Participation grant (TaReCDa/ReWARDS, Machala, Ecuador, 2023)
- Selected Research Proposal (TaReCDa/ReWARDS, Machala, Ecuador, 2023)
- Selected Extended Abstract (LatinX in CV CVPR 2024, Seattle, USA)
- Best presentation award in undergraduate consortium(LatinX in CV CVPR 2024, Seattle, USA)
- Travel and registration Scholarship (Computer Vision Foundation, Seattle, USA, 2024)
- 1st Place in UTMACH Challenge (Universidad Técnica de Machala, Machala, Ecuador, 2024)
- 1st Place in Fall AI Project Competition (MLSA, 2024)
- Travel and Accommodation Scholarship (FGV EMAp, Rio de Janeiro, Brazil, 2025)
- Participation Scholarship (KHIPU 2025, Santiago, Chile)
- Data Driven Decision Specialist program scholarship (ESPOL, Guayaquil)

TECHNICAL SKILLS

Programming	Python, Java, JavaScript, TypeScript, C#, SQL, Julia, C
Python Libraries	TensorFlow, PyTorch, Scikit-learn, Pandas, Numpy, Matplotlib, JAX
Frameworks	Django, Node.js, React.js, Angular.js, 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
Web Development	HTML, CSS, Htmx
IT Tools	Docker, Kubernetes, Jenkins, GitLab Integrations, Azure DevOps, Power BI, Tableau
Languages	English (C1), Portuguese (A2), Spanish (Native)