

MANUEL JOSUE MALLA CAMPOVERDE

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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.

Data Driven Decision Specialist

August 2025 - March 2026

Escuela Superior Politecnica del Litoral

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

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 mobile app used by professors and staff for classroom access.
- Optimized computational efficiency in real-time facial authentication using machine learning.

Junior Full-Stack Developer

February - May 2025

Freelance

Machala, Ecuador

- Development of businesses administrative dashboard using NextJs and authentication with Azure AD.
- Development of backend system including CRUD using PostgreSQL, 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

May - October 2025

LarvIA

Machala, Ecuador

- Design and deployment of machine learning pipelines for shrimp farming optimization in Ecuador and Latin America.
- Development of instance segmentation models from images of shrimp food.
- Applied photogrammetry techniques using OpenCV, to enable metric measurements from smartphone images.

Machine Learning & Data Science Research Intern

January - February 2026

CNPEM – Brazilian Nanotechnology National Laboratory

Campinas, Brazil

- Analysis of high-density electrochemical sensor data.
- Applied unsupervised machine learning methods for clustering electrochemical reaction signals.
- Development of multi-label classification models for detection of sensor-related patterns.

Machine Learning Engineer - Part-time

November 2025 - Present

LarvIA

Machala, Ecuador

- Development, training and deployment of computer vision modelos in edge devices.
- Optimization and improvement of legacy computer vision instance segmentation models.

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

- **Student Representative, Higher Education Assembly** — Universidad Técnica de Machala (November 2025 – Present)
Established partnerships with public and private institutions to support student education initiatives.
- **Microsoft Learn Student Ambassador** — Microsoft (January 2024 – Present)
Promoted technology community and peer learning through workshops on AI and data science.
- **Volunteer Staff** — PhawAI + TaReCDa 2025 (June - November 2025)
Support in organization of AI & Data Science PhawAI + TaReCDa 2025 conference in Arequipa, Peru.
- **Volunteer Staff** — Somos NLP (May 2025)
Contributed to staff activities of Somos NLP challenge.
- **Python Fundamentals Teacher** — Municipio de Huaquillas (March – April 2025)
Delivered introductory Python programming to young students, fostering digital literacy in local communities.
- **Outgoing Global Volunteers Team Member** — AIESEC in Ecuador (February – June 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)
- Best presentation award in projects Hackaton (EPIC VI Programming School for Scientific Research, Quito, Ecuador, 2026)

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, React native, Flutter
Web Development	HTML, CSS, Tailwind
IT Tools	Docker, Kubernetes, Jenkins, GitLab Integrations, Azure DevOps, Power BI, Tableau
Languages	English (C1), Portuguese (B1), Spanish (Native)