

Angel Toledo Flores

Machine Learning Engineer

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<https://resume.ingesaurio.com>

Professional Summary

- With over 3 years of experience in developing and researching Machine Learning solutions for specific problems in areas of Computer Vision (CV), Optical Character Recognition (OCR), Natural Language Processing (NLP) and Statistical Analysis, I have solid knowledge in key technologies and have worked with companies in the industry to implement effective and efficient solutions.

Work Experience

Teach Lead Machine Learning , ADEA June 2023 - Present

- Developed a document classification model based on deep learning and OMR,
- Developed image enhancement filters through processing and extracted text with OCR.
- I used NLP for categorization, deployed the software and created 2 APIs. I achieved 85% accuracy compared to the traditional 65% and reduced times by 90%.

Skills: Machine Learning, Python Developer, Computer Vision, OCR, OMR, Deep Learning, Lead.

Teacher Data Science, UTEL - UCAMP. January 2023 - July 2023

- Data science fundamentals training and Mentoring in the creation of portfolios

Skills: Machine Learning, Python Developer, Data Science, Teaching.

Machine Learning Engineer, Emergys. January 2022 - June 2023

- Developed software using Optical Character Recognition (OCR) and Natural Language Processing (NLP) for document review and validation.
- Leading a software development team creating the workflow, establishing standardization of practices and creating the software architecture.
- Helping in the sizing of technologies, time estimation, technical resources, architecture and personnel of new machine learning projects.

Skills: Machine Learning, Python Developer, OCR, NLP, Leading, Testing, MLOps, Computer Vision.

Computer Vision Engineer, Lingodub. January 2021 - January 2022, Covent Garden, London.

- Developed and evaluated multiple object detection, classification and segmentation models for market research in the construction industry using YOLO, detectron2, Faster in Python and AWS.
- Creation of API using postman for machine learning model deployment
- Analysis, cleaning, and labeling of data for machine learning model training.

Skills: Computer Vision, Machine Learning, Deep Learning, Object Detection, Classification, Segmentation, Python, AWS, Labellmg, Jupyter Notebook, Anaconda, Postman, Keras, Tensorflow, Pythorch.

Machine Learning Researcher, Center for Automation and Robotics (UPM-CSIC). February 2020 - December 2021, Madrid, Spain.

- Developed machine vision models for precision agriculture using Keras, Tensor Flow, Matlab, Retina Net, Python, Jupyter, Python 3, Labellmg.
- Worked with Robotic Operating Systems (ROS) for teleoperation of autonomous vehicles using ROS, Matlab.
- Writing of scientific articles and creation of posters for scientific congresses.

Skills: Computer Vision, Machine Learning, Deep Learning, Object Detection, Classification, Segmentation, Python, AWS, Labellmg, Jupyter Notebook, Anaconda, ROS, Keras, Tensorflow, Pytorch.

Professor Associate / Professor Assistant . Universidad Autónoma Chapingo. March 2018 - November 2018 (Associate) / September 2018 - December 2018 . Texcoco. Mexico.

- Taught mathematics courses to undergraduate students. (Advisors by Accompaniment program - Algebra I, Algebra II Geometry and Trigonometry, Agricultural High School) / (Peer Mathematics program - Vector Calculus, Differential Equations, and Linear Algebra, Department of Phytotechnics, Department of Protected Horticulture).

Skills: Teaching, Mathematics, Mathematics Development, mathematical analysis.

Science Contributions

- MULTI-CLASS WEED DETECTION AND CLASSIFICATION SYSTEM FOR TOMATO (*Solanum lycopersicum* L.) USING NEURAL NETWORKS. Angel TOLEDO, Juan LÓPEZ CORREA, Dionisio ANDÚJAR. CLAP 2022.
- USING COMPUTER VISION AND RGB IMAGES TO QUANTIFY PLANT SPATIAL DISTRIBUTION IN CORN. Villa S, Toledo Angel, Lopez-Correa, Peralta-Cuquejo R, Balboa, G. CLAP 2022.
- OBJECT DETECTION-BASED NEURAL NETWORKS FOR WEED MANAGEMENT . Juan Manuel López Correa, Angel Toledo Flores, Orly Enrique Apolo, Dionisio Andujar. CLAP 2022.
- INTELLIGENT WEED TREATMENT BY ISOBUS BASED ON AUTOMATIC RECOGNITION IN TOMATO CULTIVATION. Juan López-Correa, Angel Toledo, Dionisio Andújar. SHIBIH 2022.

Education

- **Master´s degree in computational science and applied mathematics.** International University of la Rioja (UNIR) Spain (In progress) 2022- 2025.
- **Computer System Engineering.** Virtual University of the State of Guanajuato (UVEG) Mexico (In progress) 2020 - 2025.
- **Agricultural Mechanical Engineer.** Chapingo Autonomous University (UACH) Mexico. Degree (Graduated by academic merit) 2017-2021.
 - **Mechanical Engineer.** Pontificia Bolivariana University (UPB) Colombia. Academic Exchange (2019).

Languages Skills

- Spanish: Native speaker
- English: Basic - Intermediate