MARTIN FLEMING

COMPUTER ENGINEER

CONTACT

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EXPERIENCE

STUDENT RESEARCHER, LABORATORY III-LIDI, FACULTY OF INFORMATICS, UNLP

MARCH 2021 – DECEMBER 2021

Development of a machine learning library capable of executing inference of neural network models on microcontrollers with significant hardware constraints. Tasks performed: Ilibrary implementation in C/C++ to execute these algorithms; implementation of algorithm capable of transforming Tensorflow models to the created library.

STUDENT RESEARCHER, LEICI LABORATORY, FACULTY OF ENGINEERING, UNLP

APRIL 2021- DECEMBER 2021

Development of a traffic light control system using security cameras using object detection in videos with neural networks. Tasks performed: Study of object detection architectures, such as YOLO, and object tracking architectures, such as DeepSort. Generation of a control system from the results obtained in the detection stage using the SUMO simulator written in Python.

EDUCATION

COMPUTER ENGINEERING

NATIONAL UNIVERSITY OF LA PLATA

START: JANUARY 2017

COMPLETION: DECEMBER 2021

KEY COMPETENCES

- Good communication and interpersonal skills
- Ability to work collaboratively as part of a team
- Experience in projects with
  - Python – Tensorflow – Jupyter Notebook
  - SQL
  - Flask
  - HTML – CSS – Javascript – jQuery
  - C/C++
  - Git – Github

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PROJECTS

CRAWLER-BOT

(https://github.com/flemingmartin/crawler-bot)

Development of Robot Crawler with a Raspberry Pi 4 controlled by a server in Flask capable of learning to walk through Reinforced Learning, using the Q-Learning algorithm.

ANALISIS_TRAFICO

(https://github.com/flemingmartin/analisis_trafico)

Development of a traffic analysis system using vehicle and pedestrian recognition using neural networks.

PUBLICATIONS IN SCIENTIFIC JOURNALS AND CONGRESSES

MBEDML: A MACHINE LEARNING PROJECT FOR EMBEDDED SYSTEMS

SHORT PAPERS OF THE 9TH CONFERENCE ON CLOUD COMPUTING CONFERENCE, BIG DATA & EMERGING TOPICS
JUNE 2021 – LA PLATA

A NEURAL NETWORK FRAMEWORK FOR TINYML DEVICES

XXVII ARGENTINE CONGRESS OF COMPUTER SCIENCE
OCTOBER 2021 – SALTA

TRAFFIC ANALYSIS WITH NEURAL NETWORKS FOR VEHICLE RECOGNITION

XIX WORKING MEETING ON THE PROCESSING OF THE INFORMATION AND CONTROL
NOVEMBER 2021 – SAN JUAN

LIGHTWEIGHT CONVOLUTIONAL NEURAL NETWORKS FRAMEWORK FOR REALLY SMALL TINYML DEVICES

SECOND INTERNATIONAL CONFERENCE ON SMART TECHNOLOGIES, SYSTEMS AND APPLICATIONS
DECEMBER 2021 – QUITO, ECUADOR.