Axel Mendoza — Computer Vision Engineer

website github blog linkedin mail

Searching challenges in a Deep Learning related field

Skills

Programming Skills:

Python	SQL	C++

Frameworks: PyTorch TensorFlow Keras OpenCV Sklearn Numpy Pandas Matplotlib

Tools: AirFlow Git Linux GCP

Expertise:

- Medical Imaging
- Object detection
- Multi Object Tracking
- Object Re-Identification
- Pose Estimation
- Autonomous Driving

English: Fluent — *lived in the US*

Spanish: Bilingual — *hispanic origins*

French: Native — *mother tongue*

Papers

Deep Learning for Vessel-specific Coronary Artery
European Heart Journal, 2021

- Co-author for Oxford University world famous journal at Siemens.

Projects

Autonomous RC Car **2017**
Python, Keras, OpenCV *12 months*

- Remote-controlled car that predicts speed and steering angle in real-time.
- 3rd at IronCar Summer 2018 and 1st at RobotCars Winter 2018 tournaments.

Machine Learning From Scratch **2020**
PyTorch, Numpy, Pandas, Seaborn *3 months*

- From scratch implementation of the most used algorithms in machine learning.

Experience

BOXY **Dec 2020**
Computer Vision Engineer, Paris *Current*

- Designed person tracking and re-identification systems of an **autonomous grocery store**.
- Enchanced **product attribution** using Pose Estimation.
- Created a semi-automatic **annotation pipeline** to generate data for Deep Learning using Airflow and GCP.
- Managed and trained a team of 4 annotators on bounding box and pose video annotation.

SIEMENS **Apr 2019 - Jun 2020**
Computer Vision Engineer, US *14 months*

- Improved physician diagnosis of **heart disease** by creating a coronary calcium detector trained with Unet and Pytorch.
- Improved heart disease diagnosis by **classifying calcium** in high and low risk arteries.
- Optimized model complexity to fit hospital needs by designing a faster approach using ResNet3D.
- Enhanced detection of **mitral valve regurgitation** by creating a blood flow dealiasing model using Unet trained on 3D color doppler data using Pytorch and C++.
- Automated the training of these algorithms using AirFlow.

ENGIE **May - Nov 2018**
Computer Vision Intern, Paris *7 months*

- Improved security of power-plants by designing a **multi-camera vehicle re-identification and tracking** system using Keras and TensorFlow.
- Adapted a pedestrian re-id to vehicle tracking.

SAP **Feb - Jul 2016**
Software Engineering Intern, Paris *5 months*

- Improved the quality of an excel pluggin by designing an **automatic testing platform** using SQL and Python.

Education

EPITA **Apr 2018**
Computer Science, Data Science Major *5 years*

- Top 10 computer engineering master degree and machine learning program in Paris.