Axel Mendoza | Computer Vision Engineer

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website github blog linkedin mail

Recommended by the Head of AI of Siemens Healthineers,
I search a full time opportunity in Computer Vision

Skills

Programming Skills:

Python	C++	SQL

Frameworks and Tools: PyTorch TensorFlow Keras OpenCV Scikit-Learn Numpy Pandas Matplotlib Docker AirFlow Celery Git Unix

Deep Learning: Computer Vision for Medical Imaging, Object Re-Identification & Tracking and Autonomous Driving.

Machine Learning:

- Support Vector Machines
- Decision Trees, Random Forests, AdaBoost
- K-means, Guassian Mixture Models
- Naive Bayes
- K-Nearest Neighbors
- Polynomial Regression
- Logistic Regression
- Linear Regression

English: Fluent — *lived in the US*

Spanish: Bilingual — *hispanic origins*

French: Native — *mother tongue*

Projects

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

- Built a remote-controlled car able to predict speed and steering angle in real-time from an embedded camera.
- Participated in tournaments and got 3rd at IronCar Summer 2018 and 1st at RobotCars Winter 2018.

Machine Learning Blog **2020**
PyTorch, Numpy, Pandas, Seaborn *3 months*

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

Image Processing GPU **2016**
CUDA C++ *1 month*

- Implemented edge detection and de-noising algorithms from scratch using CUDA GPU programming language.

Experience

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

- Improved physician diagnosis of heart disease by creating a coronary calcium detector trained on CT scans using Unet with Pytorch.
- Improved heart disease diagnosis even further 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 workflows and Celery.

ENGIE lab Crigen **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.
- Implemented 2018 state-of-the-art solution and improved mean average precision by 6% by adapting a pedestrian re-id paper to vehicle tracking.
- Designed a framework to automatically re-train on different objects like pedestrian, faces, ect...
- Collaborated with the best researchers in the field after being invited to ECCV 2018.

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 1 computer engineering master degree and most prized machine learning program in France.

Sejong University - South Korea **2015**
Computer Science, Seoul *6 months*

- Exchange student program at Sejong University.