# Axel Mendoza | Computer Vision Engineer

3 Rue Morand – 75011 – Paris

website github blog linkedin mail

*Deeply passionated with Computer Vision,*
*I am open to competitive opportunities*

## 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

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

- In charge of redesigning the person tracking and re-identification system of an autonomous grocery store.
- Improved the vision systems by creating a semi-automatic annotation pipeline.

**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 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 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.
- 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.