



Machine learning researcher

EDUCATION

2020 - 2024

PhD in machine learning / Bordeaux University & IMS Laboratory, France

Title : "Attention mechanism in deep learning for image matching".

My research focuses on 3D computer vision, image matching, 3D scene understanding, camera pose estimation.

2015 - 2020

Master in Data Science and Machine Learning / Cergy-Paris University & ENSEA, France

Main fields of study: Mathematics, Machine Learning, Software Engineering, Artificial Intelligence, Algorithm and Data Structure, Robotics.

2019

Study abroad / San Francisco State University, USA

Main fields of study: Search Engines, Artificial Intelligence, Data Mining, Software Engineering, Neuro-Science.

EXPERIENCE

Jul 2020 - Dec 2020

Machine learning R&D Intern / Thales, Palaiseau, France

Development of machine learning algorithms focused on analyzing the user's body, hands, gestures, and actions to enable interaction with an augmented reality headset interface. Python Pytorch Jetson Nano/TX2 Openvino

Jul 2019 - Aug 2019

Machine learning Developer / GAMEMAISTER, Paris, France

Development of machine learning algorithms for augmented reality board games, including computer vision algorithms for perceiving physical game elements and user interactions, as well as algorithms to enhance game engine intelligence. Python Tensorflow Multi-GPU

May 2018 - Sep 2018

Machine learning R&D Intern / XXII, Paris, France

Research and development of novel machine learning algorithms for neural architecture search tailored to specific application contexts.

Python Tensorflow Auto-ML CNN-LSTM Genetic algo

Jul 2017 - Jul 2017

Machine learning Developer / Freelance, Paris, France

Participated in the creation of a mixed reality board game startup, primarily contributing to the development of perception algorithms and process automation. Python Theano Image processing

May 2017 - Jun 2017

Research Assistant Intern / ETIS laboratory, Pontoise, France

Development of reinforcement learning algorithms (Q-learning) and deep learning algorithms (Deep Q-Network) for controlling a robotic arm.

C/C++ CNN from scratch Reinforcement learning ROS

May 2016 - Jun 2016

Research Assistant Intern / ETIS laboratory, Pontoise, France

Research on algorithms for the "maximum submatrix problem," focusing on mathematical formulation, algorithm design, and parallelization of the solution. C/C++ Image processing

PROJECTS

Main school projects

- **PerceptU** : Gesture controllable TV interface that recognize user emotion using audio and facial analysis.
- **Research** : Spiking neural network on event-based camera data for fall detection.
- **FaceKey** : Password manager based on facial recognition.
- **Research** : Use auto-encoders to learn object movements in an unsupervised way.
- **UrbanLifeSimulator** : simulation of citizen behavior in a city using reinforcement learning.

Main personal projects

- **Hackathon** :
 - **Enseack 2020**, smart embedded device for collaborative environmental health mapping. ★
 - **RushHourMobility 2019**, AR glasses for smart navigation. ★
 - **SFHacks 2019**, mobile app for retinal auto-diagnosis.
- **BuzzStock** : Machine learning algorithm for stock market prediction using social media data.
- **French Robotics Cup** : Machine learning guided robot.
- **AI algorithm implementation from scratch** : Q-Learning, neural network, K-means, Kohonen map, A*, Naïve Bayes ...