YUNFEI ZHAO

Statistics and Data Science student looking for internship starting in April 2022
(+33)(0)6 52 94 18 27 | Yunfei.Zhao@etu.sorbonne-universite.fr | 6 avenue anatole france 94600 Choisy Le Roi | blog.yunfeizhao.com

EDUCATION

Sorbonne University (Paris 6 Pierre et Marie-Curie) Paris, France
Master of Science, Mathematics and Applications (Statistics and Artificial Intelligence) *2021 – 2022*
Core Courses: Advanced Machine Learning, Statistical Learning, Deep Learning, Reinforcement Learning, Computer Vision, Sequential Convex Optimization and Applications, Non-Convex and Non-Smooth Optimization, Statistical Analysis of Graphs, Stochastic Optimization, Reconstruction and Completion of Matrices.

University of Technology of Compiègne Compiègne, France
Master of Engineering, Computer Science *2016 – 2021*
Core Courses: Introduction of Machine Learning, Data Mining, Numerical Analysis, Modeling of Random Phenomena, Database, Data Warehouse, Mathematical and Physical Tools for Engineering, Statistics and Probability Theory, Object-Oriented Programming and Design, Algorithms and Data Structure, Operating Systems.

PROFESSIONAL EXPERIENCE

Google Online
Google Summer of Code Intern in Redhen Community *Jun. 2021 – Aug. 2021*
- Developed a gesture temporal detection pipeline for news videos. Located starting and ending timestamp of a human hand gesture in video stream.
- Designed and developed key points extraction model and gesture detection model based on OpenPose and Transformer which can adapt to multi-person with various background.
- Trained model and delivered the final project by Singularity container on HPC.

Heudiasyc CNRS Compiègne, France
Computer Vision Research Intern *Feb. 2021 – Jul. 2021*
- Applied transfer learning on object detection model and evaluated performance on IDD road database (Yolov5, DETR).
- Constructed object detection, depth prediction (DPT) and tracing (Stark) pipelines. Integrated models in cars with Docker and evaluated models on city roads.
- Improved DETR model by stochastic methods on cross attention selection to reduce training time and to improve occluded objects detection precision.

Société Générale S.A. Paris, France
Backend Engineer Intern *Feb. 2019 – Aug. 2019*
- Developed UI for Jenkins and CI / CD to automate the development cycle for internal user.
- Built a Java program for managing financial servers and viewing server status.
- Programmed a state machine Json format checker ensuring O(1) space complexity.

PROJECT EXPERIENCE

Data Challenge ENS - Land Cover Predictive Modeling from Satellite Images (top 20%) Oct. 2021 – Nov. 2021
- Conducted Data cleaning, Data augmentation, and reduced Dimensions by using Principle Component Analysis.
- Performed classifications using KNN, Bayes, LDA, GDA, Logistic Regression, Decision Tree, Random Forest, Gradient Boosting and SVM.
- Constructed Semantic Segmentation using Unet and DPT.

Data Fusion for Car Tracking | *Extended Kalman filter, Particle filter* Dec. 2020 – Feb. 2021
- Merged GPS data and information shared between vehicles to improve the location of cars in real time.

American Airline on-time Performance Analysis | *Star diagram, Casandra, Pyspark, Kmeans.* Feb. 2020 – Apr. 2021
- Analyzed correlation between American Airline delay and its geographical information.

Fall Control by Reinforcement Learning | *Deep Q, Policy Gradient, Actor-Critic, DDPG.* Sept. 2019 - Feb. 20201
- Used reinforcement learning algorithms on musculoskeletal models in OpenSim to make it fall in a certain direction.

SKILLS AND INTERESTS

Computing Skills: Python, C++, Java, C, R, Html, Css, Javascript, Php, sql, Matlab, Uml, Latex
Frameworks: Pytorch, Tensorflow, Keras, OpenCV, ROS, Gym, MuJoCo
Complement: Git, Jenkins, Docker, Singularity
Languages: English (fluent), French (fluent), Chinese (native)
Interests: Playing guitar and playing basketball, Hauts-de-France Champion with UTC basketball team (2019-2020)