



Self-Introduction

Hao ZHANG

January 24, 2024





About me...

My name is Hao ZHANG, I'm Chinese, I live in Paris now...

- In 2022, I completed my Specialized Master®'s degree in SMART SYSTEMS & IoT at CY Tech (formerly EISTI).
- Before pursuing this Specialized Masterr®'s degree, I graduated from Leonardo da Vinci Engineering School (ESILV), specializing in Computer Science, Big Data and Connected Objects (IBO) in the Research path with the Data Science option.
- I have two different backgrounds...



Two different backgrounds





In the healthcare sector

- I was an undergraduate medical student.



In the healthcare sector

- I was an undergraduate medical student.
- In 2009, after my bachelor's degree, I took part in an international program between China and France, so I had a chance to do some simple internships (more like an observer) at some hospitals in Paris.



In the healthcare sector

- I was an undergraduate medical student.
- In 2009, after my bachelor's degree, I took part in an international program between China and France, so I had a chance to do some simple internships (more like an observer) at some hospitals in Paris.
- After my return, I worked in a Chinese pharmaceutical company, as a researcher in strategic analysis of the pharmaceutical industry.



Why start learning data science?

- Because of my work during this period, I was exposed to a lot of data analysis work, and gradually built up a strong interest in this aspect.



Why start learning data science?

- Because of my work during this period, I was exposed to a lot of data analysis work, and gradually built up a strong interest in this aspect.
- I got advice from a respected industry leader.



Why start learning data science?

- Because of my work during this period, I was exposed to a lot of data analysis work, and gradually built up a strong interest in this aspect.
- I got advice from a respected industry leader.
- Last but not least, I see a huge opportunity for unification and potential synergy in healthcare with megadata technologies.



The start of learning data science

Follow the trend and I'll go from there to further and further...





Learning data science and AI

- 2015 - 2017 University of Chongqing (CQU), Computer Technology Engineer



Learning data science and AI

- 2015 - 2017 University of Chongqing (CQU), Computer Technology Engineer
- 2017 - 2020 Leonardo da Vinci Engineering School (ESILV), Informatique, Big Data et Objets Connectés en option de Data Science



Learning data science and AI

- 2015 - 2017 University of Chongqing (CQU), Computer Technology Engineer
- 2017 - 2020 Leonardo da Vinci Engineering School (ESILV), Informatique, Big Data et Objets Connectés en option de Data Science
- 2020 - 2022 CY Tech (EISTI), Smart Systems & Internet of Things

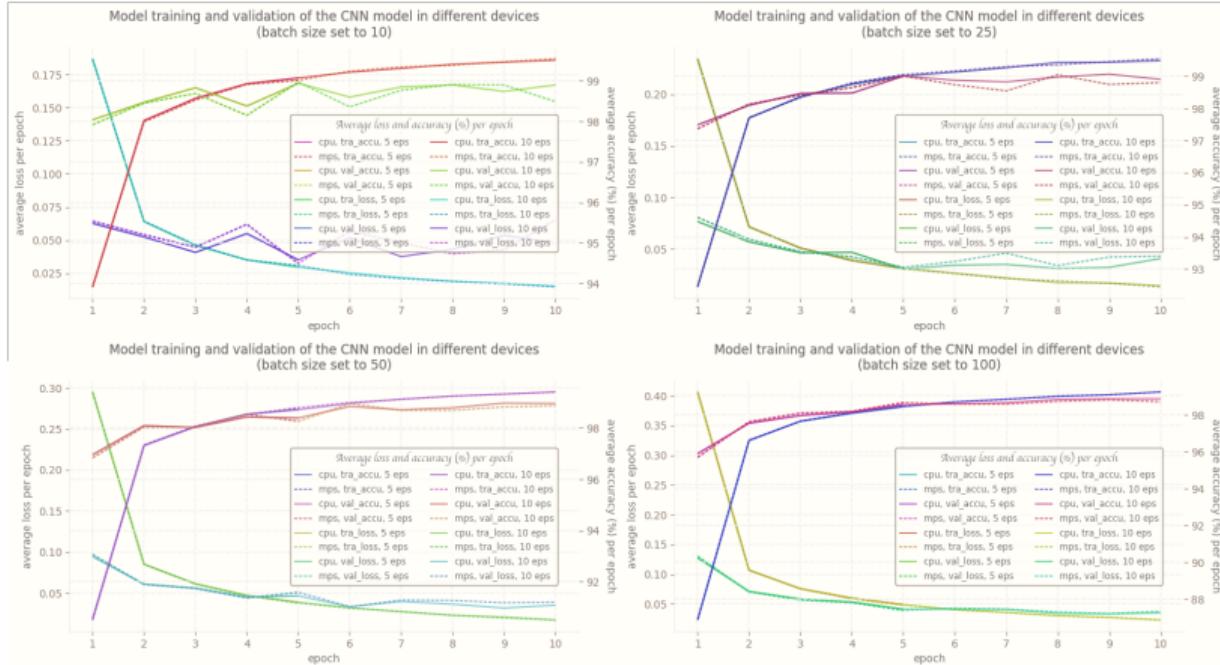


Internships in France

- CSTB, Intern in the development of economic simulation programs in Python
 - Development of a VBA economic simulation program using Python;
 - Optimization of the program with vectorization to improve the speed and efficiency of calculations.
- ELLIADD of UFC, Intern in ontology development and its semantic platform
 - Development of an ontology and a graphical database (Neo4j) in the field of digital humanities;
 - Development of intelligent services on a semantic platform based on an ontology-linked database.



My offline learning practices (1)

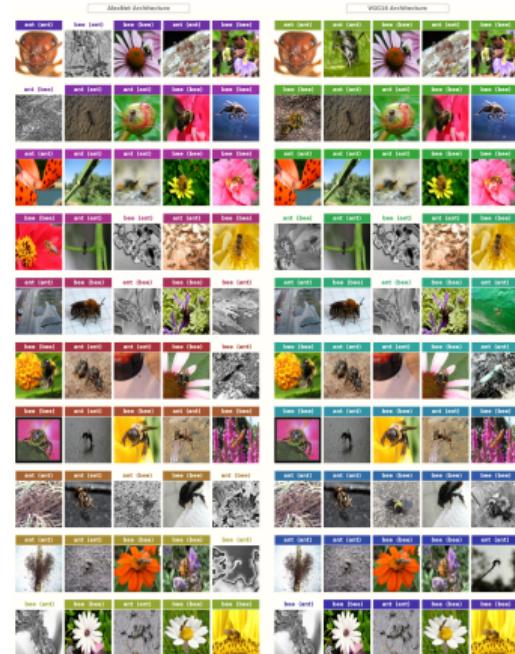
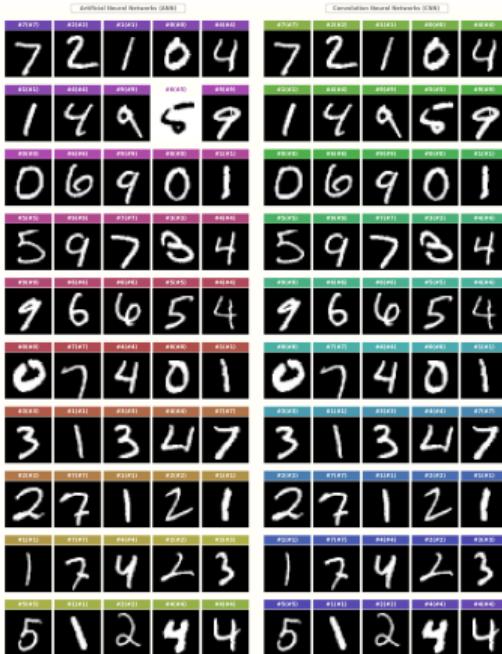


Visual Comparison of CNN Model Training and Validation across Devices and Batch Sizes

https://github.com/RaphaelZH/Udemy_Data_Science_Courses_Learning_Outcomes_EN/



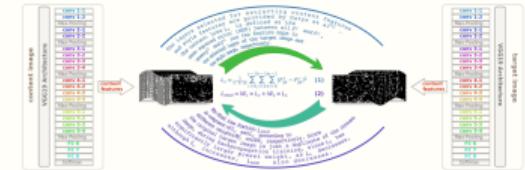
My offline learning practices (2)



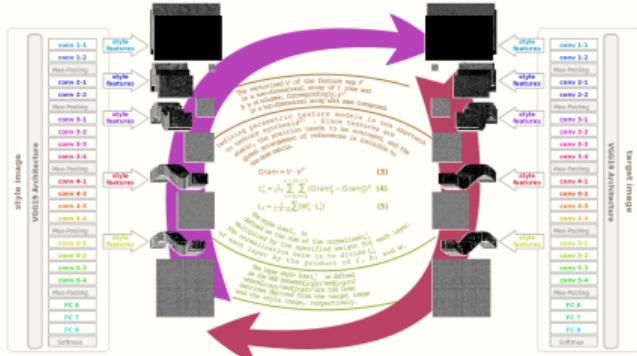
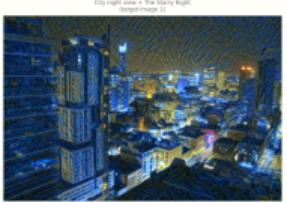
https://github.com/RaphaelZH/Udemy_Data_Science_Courses_Learning_Outcomes_EN/



My offline learning practices (3)



11. L. Gatys, A. S. Ecker, and D. Bethge, "Image Style Transfer Using Convolutional Neural Networks," 2016 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Los Angeles, CA, USA, 2016, pp. 2414–2423, doi: 10.1109/CVPR.2016.75.



12. L. Gatys, A. S. Ecker, and M. Bethge, "Texture Synthesis Using Convolutional Neural Networks," in Advances in Neural Information Processing Systems, 2015, vol. 28. [Online]. Available: <https://proceedings.neurips.cc/paper/2015/file/532317fa7031300d8f87a7e9ff97b-Paper.pdf>



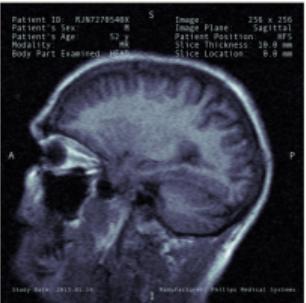
Schematic Diagram of Style Transfer Principle

https://github.com/RaphaelZHI/Udemy_Data_Science_Courses_Learning_Outcomes_EN/

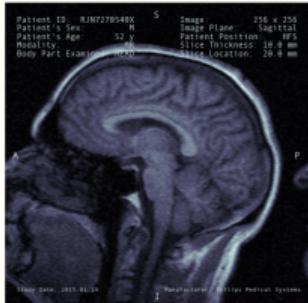


My offline learning practices (4)

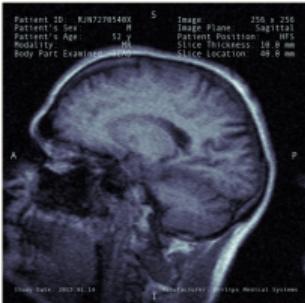
MRI sagittal plane image at 0.0 mm slice location



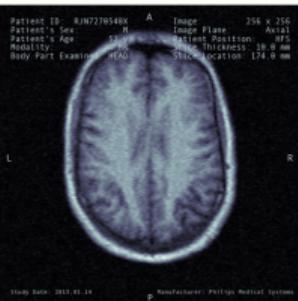
MRI sagittal plane image at 20.0 mm slice location



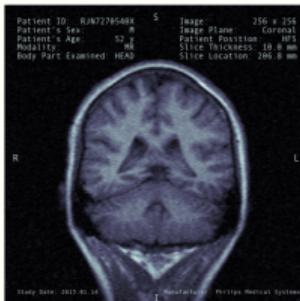
MRI sagittal plane image at 40.0 mm slice location



MRI axial plane image at 174.0 mm slice location



MRI coronal plane image at 206.8 mm slice location

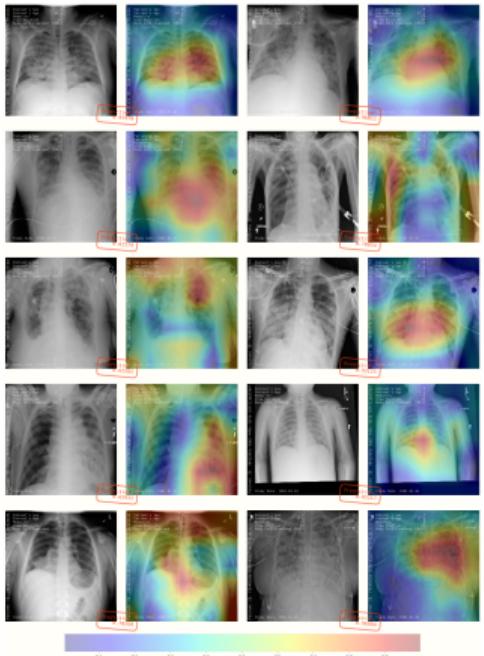
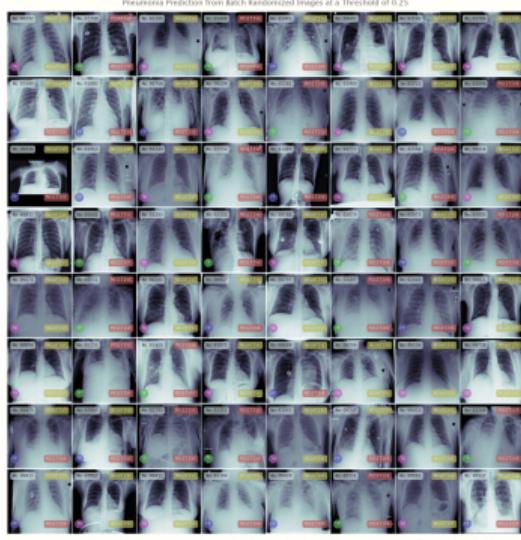
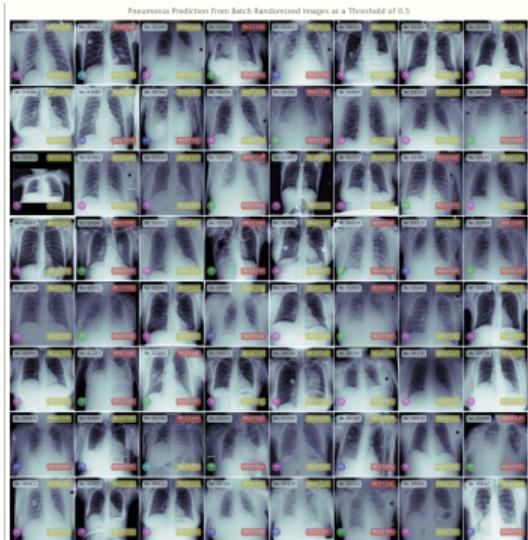


Visual Comparison of DICOM Images in Different Planes

https://github.com/RaphaelZH/Udemy_Data_Science_Courses_Learning_Outcomes_EN/



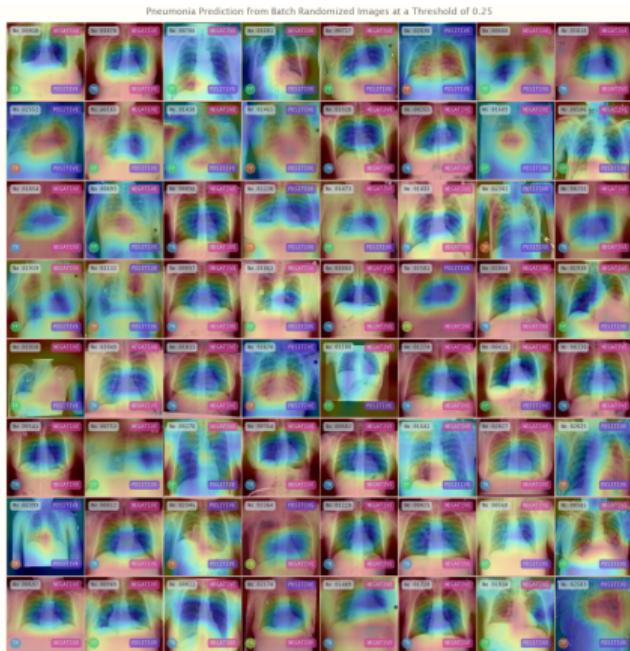
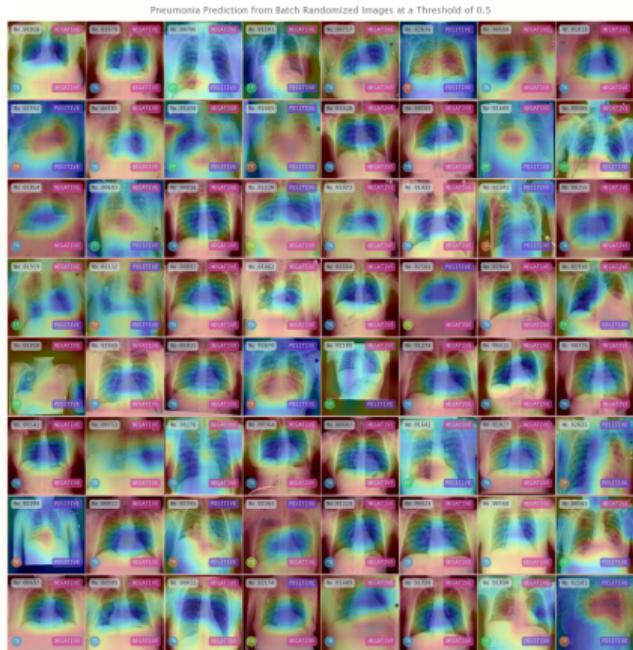
My offline learning practices (5)



https://github.com/RaphaelZH/Udemy_Data_Science_Courses_Learning_Outcomes_EN/



My offline learning practices (6)



Visual Comparison of Pneumonia Prediction and Its Class Activation Mapping (CAM) at Different Thresholds

https://github.com/RaphaelZH/Udemy_Data_Science_Courses_Learning_Outcomes_EN/



Thank you!