Hélène Tran

Ph.D student in Machine and Deep Learning

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*I have always been fascinated by Artificial Intelligence and
enjoy understanding how it operates to mimic human behavior.
I am also a considerate person who loves doing research in a way
that it contributes to the well-being of our society.*

EDUCATION

Ph.D in Computer Science   Clermont-Ferrand, France | Apr 2021 - present
University Clermont Auvergne - LIMOS laboratory
Research Topic: Automatic Multimodal Emotion Recognition using Facial Expression, Voice, and Text

Master of Computer Science - Machine Learning and Big Data   Wollongong, Australia | Jul 2018 - Dec 2019
University of Wollongong
Coursework: Computer Vision; Computational Intelligence; Machine Learning Algorithms; Big Data Analytics

Software Engineering Degree   Evry, France | Sep 2016 - Oct 2020
ENSIIE Engineering School
Coursework: Statistics and Numerical Analysis; Object-Oriented Programming; IT Project Management

Preparatory Classes for the Grandes Ecoles   Paris, France | Sep 2014 - Jun 2016
Paul Valery High School
Coursework: Intensive courses in Mathematics and Physics; Engineering Sciences; English

WORK EXPERIENCE

JEOLIS SOLUTIONS | Artificial Intelligence Ph.D student   Clermont-Ferrand, France | Apr 2021 – present
Project: Emo'LIS: Development of an automatic emotion recognition based on facial expression, voice, and text.
CIFRE contract between Jeolis Solutions company and LIMOS computer science laboratory

- Acquired the main concepts of emotional psychology
- Defined the **application cases** of the thesis with respect to the projects of the company
- Literature review of multimodal databases for emotion recognition
- Literature review of multimodal emotion recognition models *(ongoing)*
- Experimentation for the development of a new emotion recognition model *(ongoing)*
- Collaboration with three Master students working on emotion recognition

GUERBET | Deep Learning Research Intern   Paris, France | Feb 2020 – Aug 2020
Project: Prostate tumor classification based on multiparametric MRI

- Literature review of Deep Learning models for medical image and prostate cancer classification
- MRI images preprocessing and development of Deep Learning models in **Python 3.7** using **TensorFlow 2.0** and **scikit-learn** libraries
- Converted biopsy reports into structured data
- **Cloud computing** services with Microsoft Azure and **Mendeley** for reference management

ONKODICOM | Front-End developer Wollongong, Australia | Mar 2019 – Dec 2019

Project: Software development of <u>OnkoDICOM</u>, an open-source platform for radiotherapy research based on the DICOM standard. Currently being used by Radiation Oncologists at the Illawarra Cancer Care Centre (Australia)

- Performed research on DICOM standard and radiomics for Machine Learning pipeline
- Designed the wireframes of the platform
- Developed the Front-End of OnkoDICOM in Python 3 using **PyQt5**, **matplotlib**, and **pydicom** librairies
- Scrum project management: weekly meeting with the SCRUM master and the product owner
- Used **Github**, **Redmine**, and **Slack** for collaborative work

PUBLICATION

Hélène Tran, Lisa Brelet, Issam Falih, Xavier Goblet, & Engelbert Mephu Nguifo (2022). L'ambiguïté dans la représentation des émotions : état de l'art des bases de données multimodales. *Revue des Nouvelles Technologies de l'Information, Extraction et Gestion des Connaissances, RNTI-E-38, 87-98.* <u>https://editions-rnti.fr/?inprocid=1002719</u>

CERTIFICATIONS

Writing and publishing a scientific article online (fun-mooc.fr) | Jun 2021
Development Research Institute (IRD)

Fundamentals of Deep Learning for Computer Vision Wollongong, Australia | Sep 2019
NVIDIA Deep Learning Institute

SKILLS

Machine Learning: Scikit-learn, TensorFlow, Keras, Numpy, Matplotlib, Pandas
Programming: Python, C, Java
Others: Cloud Computing (Microsoft Azure), Git, Redmine, Mendeley, Agile Management, Django

LANGUAGES

English: Upper-intermediate. *Having studied in Australia for one year and a half, I can easily read scientific papers and non-technical text. I speak English quite fluently.*

French: Proficient. *I practice French in my daily life, having lived in France for most of my life.*

VOLUNTEERING

Ph.D. activities:

- Communication manager of <u>Miners LinkedIn page</u> (Data Mining research group of LIMOS)
- Part of the organizing board for the scientific days of doctoral students (Jun 2022)

Other volunteering activities:

- Programming workshop facilitator (Mar - Jun 2018) for Colombbus association in France. *Teaching programming through game development for high school students.*
- Treasurer and active member (Oct 2016 - Oct 2017), then President (Oct 2017 - Oct 2018) of HumanIIE association in France. *Organised and went on a trip to Nepal to teach the use of office softwares to high school students.*