



23 years old

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Vendée (85) - France

LANGUAGES

- Fluent French
- English C1 on the CEFR scale

PROGRAMMING

- Preferred : C, C++
- Python :
 - machine learning
 - data mining
 - visualization
- Matlab :
 - computer vision toolbox
 - signal processing
- Little experience : Bash, Java, HTML, Javascript (WebGL), SQL
- Coding competitions

IT SKILLS

- Microsoft Office Suite, LaTeX
- Premier Pro, Audacity
- Windows, Linux, WSL
- PC building

OUTSIDE INTERESTS

- International and national news
- Scientific advances
- Melomaniac, cinephile
- Indie simulation games
- Playing and watching sports

Louis Fréneau

Starting a PHD thesis about volumetric video compression

FORMATION

2020-2024 : INSA Rennes – Electronics & Computer Engineering Department

- Low-level programming languages, microcontroller architecture, signal processing
- Research program :
 - Bibliographic report on the Green Metadata, a norm optimizing the energy consumption of recent video codecs
 - Creation of predictive and profiling models from the tool occurrences of a VVC encoder by using machine learning

2022 : Erasmus semester – Luleå University of Technology (Sweden)

- Computer vision, data mining, applied AI, real-time computer graphics

2018-2020 : INSA Rennes – General engineering degree course

- Mathematics, computer science, physics, chemistry, industrial sciences

2018 : Scientific baccalaureate with distinction (specialization : Mathematics)

2005-2018 : Music conservatory – Montaigu-Vendée

- Diplomas in music theory and instrumental practice (slide trombone)

PROFESSIONAL EXPERIENCE

2023 : Final year project – Ultra Video Group, Tampere University (Finland) 6 months

- Research team specialized in video encoding and immersive contents
- Deep study of the video-based point-cloud compression (V-PCC) standard
- Profiling the reference software TMC2 and implementing new features

2022 : Internship - MediaKind, global media processing and delivery company 3 months

- Study of the innovative Blind Video Quality Assessment (BVQA) research field which aims to predict the subjective quality of a video by having as only input the latter
 - Deep overview of the state of the art & recommendations for the company use case
 - Ablation study of a recent BVQA algorithm
 - Implementation of a prototypical BVQA model in the company framework

2021 : Internship - Research team Vaader (IETR), specialists in video processing 3 months

- Creation of profiling scripts comparing three video decoders associating to the new codec H266 (VVC)
- Realization of continuous integration tools assisting the development of the new Vaader video decoder OpenVVC

Member of the Junior-Entreprise Ouest INSA 2 mandates

- Association subject to tax and similar to a company, connecting customer with students
- **Since 2021 : SOC member** Old member committee counselling the current mandate
- **2020 : Management Auditor** Control of the treasury center, creation of processes and training tools aiming to ensure the sustainability of the structure
- **2019 : Accountant** In charge of book-entry accounts and treasurer's right hand

2020 : Temporary assignments 3 weeks Agrifood industries

2018-2019 : Seasonal work 3 months Agrifood industries, market garden

ADDITIONAL ACTIVITIES

Music : Active member of various bands : harmonic orchestra, big band, jazz-band, fanfare

Sport : Practice of basketball in a club for 12 years, seasoned hiker

Theatre : Company of amateur students managed by professionals (2021-2022)

Social involvement : Volunteer usher in a cinema for 2 years, members of INSA Rennes students groups organizing big gaming events, coding competitions or speech contests

Personal project : Creation of a C++ graphic application based on Fourier transform which convert continuous drawings into interactive epicycloids