

Céline Demonsant

demonsant.com

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Education

Ecole Supérieure D'Ingenieur Leonard de Vinci (ESILV)

2018 - 2022

Master, French Engineering School CTI

Paris, la Defense

- **Relevant Coursework:** Computer Vision, Data Science, Machine Learning, Signal Processing, Computer Graphics.

IFT - Devinci Innovation center

December 2022

Master Thesis

Paris, la Defense

- **Toward Intuitive Interfaces for Art and Science.** Machine Learning, Software Engineering, User Interface.

University of Newcastle

August - December 2019

Bachelor, Exchange Student

Newcastle, Australia

- **Relevant Coursework:** Data structure, Algorithms, Mobile Application Development.

Experience

Visual Intelligence for Transportation EPFL

September 2022 – August 2024

Research Engineer

Lausanne

- Full-Stack developer and maintainer of a real-time pose estimation web demo, vitademo.epfl.ch
- Implemented Kubernetes for container orchestration and added database integration to enhance functionality.
- Research and Development on AI-Driven projects. Worked on the integration of AI models within web applications, Python APIs, and Single-Board Computers with ROS2.
- Conducted scientific monitoring, regularly reading research papers to stay updated on state-of-the-art developments.
- Organizing Committee Member, STRC 2023: Contributed to coordinating the Swiss Transportation Research Conference, bringing together 100 researchers from across Switzerland.

Physics for Medicine CNRS

May 2021 – September 2021

Internship - Ultramicroscopy using ultrasound and microbubble for 3d bloodflow visualisation

Paris

- Developed a controllable arterial flow simulation using Houdini VFX
- Used the produced synthetic data to evaluate laboratory pipeline settings using Matlab

Projects

Vitademo.epfl.ch | FastApi, Cables.gl, Pytorch, Kubernetes, SQL

- Real-time pose estimation web-demo.
- Added Machine Learning models to the demo.
- Added a Database, User Account System, Google Analytics.
- Reinstalled the whole deployment with Kubernetes.
- Implemented new User Interfaces as a showcase for new fundraising.
- Presented the project during DHDays.

Global Aids | ROS2, Linux, Python, Pytorch, C++

- Stereo Camera and Single-Board system giving feedback to visually Impaired people
- Implementation of algorithms such as trajectory prediction, Visual Odometry on a resource limited hardware
- Fine-Tune and adjust laboratory models to improve performance and accuracy for real-world noisy data.

Extracurricular experience

LeoIndieGames - student association

Jan 2019 – April 2021

Board member

Paris

- Video Game development with Unity 3D
- Event manager

Skills

Languages: French, English

Programming Languages: Python, Javascript, C#, Matlab

Development Frameworks: PyTorch, FastAPI, Kubernetes, TensorFlow, Cables.gl, Houdini VFX, Unity 3d, ROS2, Linux