



# Dinh Van Chi Axel

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## Personal Profile

Freshly graduated of EPFL's [Computational Science and Engineering Master program](#), I am a highly skilled and motivated individual with a strong background in mathematics, computer science, and engineering. Through my coursework and research projects, I have developed expertise in a wide range of areas, including deep learning, computer vision and numerical simulations.

## Education

### École Polytechnique Fédérale de Lausanne, EPFL

Lausanne, Switzerland

M.Sc. in Computational Science and Engineering

Sep 2020 - Mar 2023

- Student Assistant for the Machine Learning Course in autumn 2021.
- Private Teacher in Mathematics and Physics.
- **Courses:** Deep Learning, Machine Learning, Applied Data Analysis, Image Processing 1, Advanced Numerical Analysis, Numerical Integration of Dynamical Systems, Parallel and High-Performance Computing, Software Engineering

### École Polytechnique Fédérale de Lausanne, EPFL

Lausanne, Switzerland

B.Sc. in Mathematics

Sep 2015 - Sep 2020

## Work Experience

### Cusco 11, Restaurant

Lausanne, Switzerland

Restaurant Manager

Mar 2023 - Apr 2023

- Team management, waiter during both lunch and dinner shifts.

### Sony Europe B.V.

Stuttgart, Germany

Research Intern in Computational Imaging

Apr 2022 - Sep 2022

- Interpolation of densely measured [BRDF](#) data for rendering. Doing so, the reflectance properties of isotropic material could be acquired in around 5 minutes against 8 hours prior the project.
- Implementation using Python and C++. For rendering, the Mitsuba 2 and Unreal Engine softwares were used.
- **Technical Skills:** Python with PyTorch, NumPy, Matplotlib, Pandas, Scikit-learn, C++, OpenGL, Slurm, Ubuntu Linux, Linux tools, Apt, Scripting, Git.
- **Soft Skills:** Communication, Presentation skills.

## Projects

### Motion Correction in Cardiac MRIs

Lausanne, Switzerland

École Polytechnique Fédérale de Lausanne, [Computer Vision Laboratory](#)

Oct 2022 - Mar 2023

- Deep Learning based extraction of Left Ventricles in MRIs.
- Using pure post-processing methods we improved the overall quality of the MRI scans, avoiding redundant uses of MRI scanner, which are both time-consuming and expensive.
- **Technical Skills:** PyTorch, PyTorch Lightning, WandB, Slurm.
- **Soft Skills:** Presentation skills, Report writing.

### PDE Solving using Deep Learning

Lausanne, Switzerland

École Polytechnique Fédérale de Lausanne, [Chair of Computational Mathematics and Simulation Science](#)

Sep 2021 - Feb 2022

- Implementation of a Variational Physics-Informed Neural Network framework capable of handling imaginary numbers.
- Experiments made on the Helmholtz equation.

### Transfer-Learning in Natural Language Processing

Lausanne, Switzerland

École Polytechnique Fédérale de Lausanne, [Machine Learning and Optimization Laboratory](#)

Mar 2021 - Jun 2021

- Study of the finetuning of Bert model by freezing 99.9% of its weights.
- **Technical Skills:** Natural Language Processing, Hugging Face.

## Mobile Application Development

Personal Project

- Integration of a finetuned PyTorch NLP model used as a ChatBot which must reply using a predefined answers database.
- **Technical Skills:** Android Studio, Flutter.

## Skills

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**Programming** Python (Pandas, PyTorch, NumPy, Scikit-learn, Seaborn, etc...), CUDA, OpenMPI, Matlab, C++,  $\LaTeX$ , Slurm, Git, Markdown.  
**Engineering** Simulation of ODEs and PDEs, Linear Algebra and Matrix Theory, Computer Vision, Signal Processing, Statistics.  
**Soft Skills** Teamwork, Problem-solving, Documentation, Engaging Presentation.

## Interests

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**Cooking** I enjoy cooking on my free-time, especially Italian cuisine.  
**Sports** Coming from a city along the sea, I love to wake board and surf. During my time in Switzerland, I could easily access the mountains to snowboard.

## Languages

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**English** Professional proficiency  
**French** Native proficiency