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 automn 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 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

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

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

English Professional proficiency

French Native proficiency