Minh Tri LÊ, Ph.D.

Seeking an R&D role in AI
Available in Grenoble or remotely

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Minh Tri LÊ

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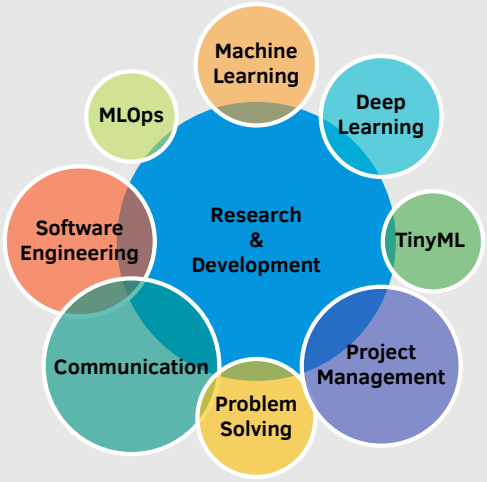
Skills Summary



Computer Languages

Python, TF/PyTorch, Scikit-learn, Numpy

C/C++, SQL3, Matlab, JS/TS, HTML/CSS

Bash

Software and Tools

Git, DBMS, REST API

Linux, Lightroom, Premiere Pro/AE

Languages

French, English, Italian, Spanish, Vietnamese, Polish, Mandarin

Work Experience

Jun 2020 - Jun 2023 — **Industrial Ph.D. in Deep Learning** — ***TDK - InvenSense*** & Inria — Grenoble
Deep learning for sensor-based applications on ultra-low-power micro-controllers. CIFRE Ph.D.
- Demonstrated ability to collaborate and innovate within international R&D teams through *patents*, and *papers* in international conferences
- Delivered two prototypes with live demos for speech and gesture recognition running a tiny neural network
- Researched a novel algorithm for flexible parameter precisions down to 1-bit, reducing model size by 50% with acceptable loss
- Created and developed an MLOps industry-standard software to train and deploy neural networks on the most constrained hardware (< 8KB)

Keywords: *Neural Networks, TinyML, Model Compression, Quantization, Edge Inference, Speech & Motion recognition, Sensors, R&D, Prototyping*

Feb - Aug 2019 — **Research Engineer Intern in Deep Learning** — ***TDK - InvenSense*** — Grenoble
Deep Learning applied to micro-controllers
Reference: ***here***
- Outperformed current classic algorithms in accuracy, power consumption & efficiency of the design cycle for fingerprint applications

Sep 2017 - Feb 2018 — **Web Developer Intern** — ***Metadot Corporation*** — Austin, TX
Development of a *Cloud connected Keyboard Application*
Reference: ***here***
- Developed and deployed new features to production: dashboard panel real-time socket connection, task scheduler...
- Project management and code development with Scrum & Kanban

Education

2020 - 2023 **Ph.D. - Deep Learning** — ***Université Grenoble Alpes*** — Grenoble
Deep learning for sensor-based applications.
Industrial Ph.D, *CIFRE contract* with *@TDK InvenSense* and *Statify team* at *Inria* | Advisors: *Etienne de Foras* & *Julyan Arbel*

2013 - 2019 **M.Sc. - Computer Science & Eng.** — ***Université de Technologie de Compiègne*** — Compiègne
Focus: ***Artificial Intelligence***

2018 - 2019 **M.Sc. - Computer Science** — ***Scuola Politecnica di Genova*** — Genoa
Master: ***Laurea Magistrale in Ingegneria Informatica***
- Double European Master degree (*EMECIS*): *European Master in Engineering for Complex and Interacting Systems (Erasmus exchange)*

2018 - 2019 **M.Sc. - Complex System Engineering** — ***UT - Compiègne*** — Compiègne
Specialization: ***Machine Learning & Optimization***
- Double European Master degree (*EMECIS*), in parallel with my final year at the UTC. *Labex MS2T program*. Da Vinci grant.

Patents

2022 — Lê, M. T. & de Foras, E. One bit quantization for embedded systems. *U.S. patent, filed.*

2022 — Ponçot, R., *Lê, M. T.*, de Foras, E., Ataya, A., & Hartwell, P. G. Method for improved keyword spotting. *U.S. patent application, pending.*

Selected publications

2023 — Lê, M. T. et al. (2023). Efficient Neural Networks for Tiny Machine Learning: A Comprehensive Review. *Submitted to Computational Statistics.*

2023 — Lê, M. T. et al. (2023). Regularization for Hybrid N-Bit Weight Quantization of Neural Networks on Ultra-Low Power Microcontrollers. In ICANN 2023.

2023 — Lê, M. T. et al. (2023). TinyMLOps for real-time ultra-low power MCUs applied to frame-based event classification. In EuroMLSys 2023.