LILA CUNGE

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J-2 Visa and EAD

Medical Imaging Engineer with experience in AI and MRI image processing, including a research engineer role, I am passionate about medical innovation and eager to develop new skills. I thrive on challenges and look forward to contributing to cutting-edge projects in Los Angeles.

PROFESSIONAL EXPERIENCE

Research Engineer in MRI Reconstruction
Grenoble Institute of Neurosciences
NOVEMBER 2024 -

Develop an innovative deep learning-based method for ultra-fast MR fingerprint reconstruction. Design and implement neural network architectures using TensorFlow and PyTorch, combining with MR physics priors to optimize image reconstruction.

Research internship in medical signal processing
ICONEUS, Paris
FEBRUARY 2024 - AUGUST 2024

Process functional ultrasound image and signal with Python. Denoise signal using different methods. Compare groups of subjects to establish differences in brain functional connectivity.

- Machine learning algorithm (ICA) / Deep learning (CNN)
- Statistics for data analysis (e.g. : TFCE, permutation test...)
- Data pre-processing and registration

Research project
CEA, Grenoble
SEPTEMBER 2023 - JANUARY 2024

Estimate blood pressure from optical data using machine learning and deep learning models.

- Applied mathematics for signal processing (time series).
- Machine learning and deep learning algorithms.
- Python / Git

Medical imaging internship
Institute of Biophysics and Biomedical engineering, Lisbon
MAY 2022 - JULY 2022

Research and analysis of new MRI biomarkers to improve diagnosis of pediatric multiple sclerosis.

- Python / Matlab and its extension SPM / FSL
- Data anonymization (DICOM/NIfTI processing)
- Image processing (registration, normalization, correction)
- Lesion segmentation
- Analysis and synthesis of results

SCIENTIFIC CONTRIBUTIONS

Contribution to scientific papers :

Coudert, T., Delphin, A., Marçal, M. S. M., Barrier, A., **Cunge, L.**, Legris, L., Warnking, J. M., Lemasson, B., Barbier, E. L., & Christen, T. (2025). MR-WAVES: MR water-diffusion and vascular effects simulations. Magnetic Resonance in Medicine, [under submission]

Participation in conferences :

Barrier, A., **Cunge, L.**, Coudert, T., Delphin, A., Legris, L., Oudoumanessah, G., Lamalle, L., Forbes, F., Doneva, M., Lemasson, B., Barbier, E. L., & Christen, T. (2025). MARVEL MRF for Contrast-free Blood Volume, Microvascular Properties, and Relaxometry Mapping: Initial Tests in Volunteers and Stroke Patients. ISMRM 2025, Power Pitch Digital Poster.

EDUCATION

- Medical imaging engineering school
  SEPTEMBER 2020 - SEPTEMBER 2024
  National Polytechnical Institute of Grenoble, Phelma
  Equivalent to a Master's degree. Courses in image processing, medical imaging methods, and AI (the full program is detailed here). International program (courses taught in English). GPA = 4.

- Master of science in management
  SEPTEMBER 2022 - SEPTEMBER 2023
  GEM (Grenoble Ecole de Management), Grenoble
  Double-diploma (equivalent to a double master's degree) in international management and marketing within the "Grande Ecole" program. Courses in management, marketing and start-up strategy. GPA = 3.8. Final internship at Becton Dickinson as a product owner. Manage product strategy and agile development to align market needs with business objectives.

SKILLS

TECHNICAL SKILLS

- MS office suite
- **Python :** OpenCV, scikit-learn, Pandas, TensorFlow, Pytorch
- Matlab
- C language
- SQL

Coursera certification: Convolutional Neural Network of DeepLearning.AI
Introduction to AWS Cloud of AWS
AWS Cloud Technical Essentials of AWS

SOFT SKILLS

Adaptability & Quick Learning: Successfully adapted to new working environments through my double degree program, which involved adjusting to different academic cultures and workflows.

Team collaboration: I have learned to communicate and work effectively with various teams to achieve common goals during my studies.

Problem solving: My various research experiences have enabled me to develop approaches for solving complex problems in a structured way.

LANGUAGES

French : Native

English : Level C1. **TOEIC** (Test of English for International Communication) **: 920**

Spanish : Level B1

ASSOCIATION

2021 - 2022: Led a team responsible for managing communications with university students across multiple channels. Ensured effective and consistent messaging.