FROMSA TESHOME NEGASA

Créteil, France | fromsa-teshome.negasa@etu.u-pec.fr | LinkedIn | GitHub | Website

OBJECTIVE

Seeking a Master's Thesis Internship with the goal of pursuing a PhD in the field of AI applications, particularly in computer vision, and biomedical imaging. Eager to contribute to innovative projects and leverage advanced technologies to drive progress in these interdisciplinary areas.

EDUCATION

- **ERASMUS MUNDUS JOINT MASTER'S DEGREE (EMJMD)** *September 2023 – Ongoing*
  EMJMD in Photonics for Security Reliability Sustainability and Safety (PSRS) Saint-Étienne, France
  - Earned 30 ECTS credits at Université Jean Monnet with a grade of 16.13/20
  - Earned 37 ECTS credits at University of Eastern Finland with 4.8 / 5 grade
  - Currently enrolled in the 3rd semester of the program at UPEC specializing in biometrics and computer vision
- **TIANJIN UNIVERSITY** *June 2022*
  Bachelor of Engineering in Chemical Engineering and Technology Tianjin, China
  - Completed a Propaedeutic Education program in Chinese Language prior to commencing major coursework
  - Earned 175 credits with a GPA of 3.01 / 4.00
- **UNIVERSITY OF THE PEOPLE** *June 2022*
  Associate of Science in Computer Science Online
  - GPA: 3.59 / 4.00

EXPERIENCE

- **LISSI Laboratory and IMRB (Mondor Institute of Biomedical Research)** *October 2024 - Ongoing*
  M2 Research Internship Créteil, France
  - Developing ML/DL methods to analyze cell migration patterns in Duchenne Muscular Dystrophy research
  - Implementing automated tracking systems to study myoblast migration through optical microscopy data
  - Collaborating with interdisciplinary teams to evaluate disease progression using cell migration analysis
- **Tianjin University** *September 2022 – August 2023*
  Graduate Student Assistant, School of Chemical Engineering Tianjin, China
  - Developed ML models for industrial applications and image processing at SMART Bio-informatics Lab

PROJECTS

- **Multi-Functional Biometric System** *October 2024 - January 2025*
  Tools: Python, OpenCV, TensorFlow, PyQt, [GitHub]
  - A unified system for face recognition (verification, identification, expression, age, gender, and pose estimation).
  - Included human body pose estimation and an integrated GUI for seamless user interaction.
- **Speech Classification** *January 2025*
  Tools: Python, Scipy, Matplotlib, sounddevice [GitHub]
  - A multi-classifiers ML system that classifies audio signals into two classes ("forward" and "backward").
  - Utilized spectrogram analysis, Principal Component Analysis (PCA), and model training and evaluation workflow.
- **Text-Based LLM Chat Interface and Multi-Modal LLM App with Text and Image Inputs** *October 2024*
  Tools: Python, Colab, ngrok, FastAPI [GitHub][GitHub]
  - Developed a GUI for LLMs with text and image inputs through Colab-hosted APIs.
- **Hyperspectral Imaging: Spectral Image Analysis** *April 2024*
  Tools: Nuance Ex-VIS Camera, MATLAB [GitHub]
  - Captured and analyzed spectral images with a Nuance Ex-VIS camera under simulated daylight.
- **Undergraduate Thesis Project: Amharic Character Recognition with U-Net** *January 2022 - June 2022*
  Tools: Sequential CNN, Factored CNN, U-Net, Python [GitHub]
  - Pre-processed datasets from literature sources and implemented on different architectures.
  - Achieved 93% accuracy on Amharic character recognition.
- **GoogLeNet on Labeled Faces Wild (LFW) Dataset** *November 2024*
  Tools: GoogLeNet, TesnsorFlow, GPU, Python [GitHub]
  - Trained a GoogLeNet model for face recognition on the LFW dataset over GPU
- **Research Project: China-ASEAN Online Program on Data Science and Big Data** *September 2020 - December 2020*
  Tools: Python, Keras [GitHub]
  - Led a four-person research team on Named Entity Recognition (NER) in Natural Language Processing.
  - Designed and implemented NLP models for entity extraction and classification.
- **IChemE Process Design Project: Process Simulation and Optimization** *November 2021 - June 2022*
  Tools: Aspen Plus, AutoCAD
  - Optimized vertical flash drum equipment sizing and developed a comprehensive process flow by integrating P&IDs.

Skills

- **Programming Languages:** Python, MATLAB, Kotlin
- **Deep Learning and Computer Vision Frameworks:** TensorFlow, OpenCV
- **Web & Database Technologies:** HTML, CSS, SQL
- **Other Tools & Technologies:** Microsoft Office, LaTeX(Overleaf), GitHub
- **Research Skills:** Literature Review, Data Analysis, Good Laboratory Practice, Problem Solving
- **Languages:** English (IELTS: 7.0/Duolingo: 135), Mandarin Chinese (HSK 5), Amharic (Native)

Honors and Awards

- **Erasmus Mundus Joint Master's Degree Scholarship** *September 2023*
  Education, Audiovisual and Culture Executive Agency, European Commission
  ◦ Associated with Erasmus Mundus Joint Master Degree Photonics for Security Reliability and Safety (PSRS)
- **Distinguished International Student Award** *July 2018*
  Tianjin Univeristy
  ◦ Awarded the Full Attendance Scholarship and the Second Prize Scholarship of Propaedeutic Education of Chinese Language.
- **Chinese Government Scholarship** *September 2017*
  Chinese Scholarship Council
  ◦ Associated with Tianjin University, School of Chemical Engineering

Certifications

- Android Developer Fundamentals, *Udacity*, *Oct 2024*
- OpenCV Bootcamp, *OpenCV University*, *Feb 2024*
- Google Data Analytics Professional Certificate, *Google via Coursera*, *Jun 2023*
- MATLAB Onramp, *MathWorks*, *Mar 2023*
- Chinese Proficiency Test, HSK (Level 5), *Center for Language Education and Cooperation*, *May 2022*
- Machine Learning, *Stanford University via Coursera*, *Apr 2021*

References

1. **Nathalie Destouches**
   Professor, Hubert Curien Laboratory
   University of Lyon, University of Saint-Etienne
   Email: nathalie.destouches@univ-st-etienne.fr
   Phone: +33 (0)6 07 79 52 31
   Relationship: EMJMD PSRS Head Coordinator
2. **Amine Nait-Ali**
   Professor, Biometrics Research Group
   University of Paris-Est Créteil (UPEC)
   Email: naitali@u-pec.fr
   Relationship: PSRS Coordinator at UPEC
3. **Polina Kuzhir**
   Professor, Department of Physics and Mathematics
   University of Eastern Finland (UEF)
   Email: polina.kuzhir@uef.fi
   Phone: +358 50 566 6624