

Anderson AUGUSMA | Ph.D. in Applied Mathematics and Computer Science

✉ anderson.augusma@univ-grenoble-alpes.fr • 🌐 augusmaa.github.io
in anderson-augusma-552333196

Education

Université Grenoble Alpes **Grenoble, France**
Ph.D. Candidate *2021–Present*

Research areas: Multimodal Perception, Audio Modeling, and Privacy-safe Analysis.

Supervisors: Prof. Dominique Vaufreydaz, Dr. Frédérique Letué.

Université Claude Bernard Lyon1 (UCBL) **Lyon, France**
M.Sc. Econometrics & Statistics (Specialization in IT Security & Risk) *2019–2021*

- Thesis: An introduction to machine learning, application to auto insurance claim prediction

Université d'Etat d'Haïti (UEH), Collaboration with Université de Poitiers (France) **Port-au-Prince, Haïti**
M.Sc. Fundamental and Applied Mathematics *2017–2019*

- Optimization Thesis: Expediting the transition from non-renewable energy to renewable energy via optimal control (H. Maurer, 2017)
- Partial Differential Equation Thesis: Resolution of the wave equation in \mathbb{R}^n

Université d'Etat d'Haïti (UEH) **Port-au-Prince, Haïti**
B.Sc. Fundamental Mathematics *2013–2017*

Research Experience

Université Grenoble Alpes, Computer-Lab (LIG) **Grenoble, France**
Ph.D. Candidate *2021–Present*

- Conducting advanced research in multimodal perception for classroom activities, with a focus on group emotion recognition.
- Developed a novel approach for group-level emotion classification in-the-wild using synthetic video as data augmentation with a ViT-L backbone, achieving a 20% improvement in prediction accuracy.
- Published in top-tier conferences, including ICMI and INTERSPEECH.
- **Current Project:** Multi-task learning for improved latent space representations for Emotion Recognition via a Variational Encoder (VE).

Publications

- **INTER_SPEECH 2024**, Leang, S., **Augusma, A.**, Castelli, E., Letué, F., Sam, S., Vaufreydaz, D. "Exploring VQ-VAE for Prosody Parameters Anonymization", Voice Privacy Challenge 2024 at INTER_SPEECH 2024, Sep 2024.
- **ACM ICMI 2023**, **Augusma, A.**, Vaufreydaz, D., Letué F., "Multimodal Group Emotion Recognition In-the-wild Using Privacy-Compliant Features," International Conference on Multimodal Interaction, 2023. doi: 10.1145/3577190.3616546.
- **IEEE ACII 2022**, **Augusma, A.**, "Multimodal Perception and Statistical Modeling of Pedagogical Classroom Events Using a Privacy-safe Non-individual Approach," International Conference on Affective Computing and Intelligent Interaction Workshops and Demos (ACIIW), Nara, Japan, 2022, pp. 1–5, doi:10.1109/ACIIW57231.2022.10086029.

Internships

LAMES, Gustave Eiffel University **Nantes, France**
Data Science Intern *May–Oct 2021*

Prediction and evaluation of road pavement failure modes using statistical and ML techniques.

Languages

Fluent: French, English (Professional Proficiency)

Native: Haitian Creole

Technical Skills

Programming Languages: Python, R, SQL, C, PHP, HTML

Machine Learning & Deep Learning: PyTorch, TensorFlow/Keras, Scikit-Learn, CNNs, Transformers, VAE/VQ-VAE, Object Detection, Pose Detection, Instance Segmentation

Operating Systems & Tools: Unix/Linux (shell), Windows, Git

Other: TeX/LaTeX, Microsoft Office Suite, Access

Awards & Honors

2023: 1st Place, Emotion Recognition in the Wild Challenge (EmotiW), ACM ICMI 2023

2020: Eiffel Excellence French Scholarship Government Excellence Grant, MASTER-EIFFEL LAUREATS 2020 program, Campus-France.

2018: Mathematics Excellence Grant, Université d'État d'Haïti

Conference and Talks

INTERSPEECH 2024

Speaker and author in Voice Privacy Challenge

Kos, Greece

Sep 2024

International Conference on Multimodal Interaction (ICMI)

Speaker and author in ICMI/EmotiW

Paris, France

Oct, 2023

Université de Lorraine

Invited Speaker at PhD Seminar

Metz, France

Feb, 2023

International Conference on Affective Computing & Intelligent Interaction (ACII)

Speaker and author in Doctoral Consortium (DC), (Remote participation)

Nara, Japan

Oct, 2022

EIAH 2022

Participant

Leysin, Switzerland

Nov 2022

ECML PKDD 2022

Participant

Grenoble, France

Sep 2022

Hobbies and Community Involvement

Hobbies: Music, Hiking

Community Services: Volunteer as trumpet player in the Orchestre du Campus de Grenoble (OCG), 2023, Grenoble, France.