

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

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

## **Education**

<b>Université Grenoble Alpes</b> <i>Ph.D. Candidate</i>	<b>Grenoble, France</b> 2021–Present
<b>Research areas:</b> Multimodal Perception, Audio Modeling, and Privacy-safe Analysis.	
<b>Supervisors:</b> Prof. Dominique Vaufreydaz, Dr. Frédérique Letué.	
<b>Université Claude Bernard Lyon1 (UCBL)</b> <i>M.Sc. Econometrics &amp; Statistics (Specialization in IT Security &amp; Risk)</i>	<b>Lyon, France</b> 2019–2021
○ Thesis: An introduction to machine learning, application to auto insurance claim prediction	
<b>Université d'Etat d'Haïti (UEH), Collaboration with Université de Poitiers (France)</b> <i>M.Sc. Fundamental and Applied Mathematics</i>	<b>Port-au-Prince, Haïti</b> 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 $\mathbf{R}^n$	
<b>Université d'Etat d'Haïti (UEH)</b> <i>B.Sc. Fundamental Mathematics</i>	<b>Port-au-Prince, Haïti</b> 2013–2017

## **Research Experience**

<b>Université Grenoble Alpes, Computer-Lab (LIG)</b> <i>Ph.D. Candidate</i>	<b>Grenoble, France</b> 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.	
○ <b>Current Project:</b> Multi-task learning for improved latent space representations for Emotion Recognition via a Variational Encoder (VE).	

## **Publications**

- **INTERSPEECH 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 INTERSPEECH 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**

<b>LAMES, Gustave Eiffel University</b> <i>Data Science Intern</i>	<b>Nantes, France</b> May–Oct 2021
Prediction and evaluation of road pavement failure modes using statistical and ML techniques.	

## INSAVALOR/PROVADEMS

Data Analyst Intern

Data analysis and statistical modeling of household waste.

Lyon, France

Jun–Aug 2020

## Languages

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**Fluent:** French, English (Professional Proficiency)

**Native:** Haitian Creole

## Technical Skills

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**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

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**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

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### 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

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**Hobbies:** Music, Hiking

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