RAPHAEL **BOURNET**

ML Engieneer

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SKILLS

Programming

- C/C++
- Python
- Java
- C#
- Bash scripting
- Javascript

ML Frameworks

- Pytorch/Pytorch Lightning
- Numpy, Scipy, Pandas, Scikit-learn
- Panda, Seaborn

LANGUAGES

French : Native or bilingual proficiency
English : Professional working proficiency
Japanese : Elementary proficiency
German : Elementary proficiency

EDUCATION

Paris-Saclay Univerity
Master of Computer Sciences
2021 – 2023

Paris-Saclay University
Double Bachelor Mathematics & Computer Sciences
2018 – 2021

PROFESSIONAL EXPERIENCE

Research Intern

National Institute of Informatics

March 2023 - September 2023 Tokyo, Japan

- built **cross-modal machine-learning** models merging audio-visual data
- implemented **Transformers** and **Diffusion**-based models
- co-authored the paper LiveChat: VideoComment Generation from Audio-Visual Multimodal Contexts
- presented results to invited professors

Research Intern

LISN

May 2021 - July 2021
May 2022 - July 2022 Gif-sur-Yvette, France

- applied **NLP** techniques on a visualization prototype to enhance a user experience working with heavy file hierarchy
- built a research prototype for the paper Passages: Interacting with Text Across Documents which got published at the **CHI 2022** conference and received the **highest honors**
- designed an application oriented for **ex situ users**

PUBLICATIONS

Passages: Interacting with Text Across Documents, Han L. Han, Junhang Yu, Raphael Bournet, Alexandre Ciorascu, Wendy E. Mackay, *CHI 2022*
https://dl.acm.org/doi/10.1145/3491102.3502052

LiveChat: VideoComment Generation from Audio-Visual Multimodal Contexts, Julien Lalanne, Raphael Bournet, Yi Yu, *https://www.researchgate.net/publication/374264816_LiveChat_Video_Comment_Generation_from_Audio-Visual_Multimodal_Contexts*

PET PROJECTS

GMTK 2023 - Game Jam
Imagined, designed, and programmed a game with a team of 4 in **48h** with **Unity**
https://itch.io/jam/gmtk-2023/rate/2163501

Donut.cpp
Draw a 3D donut represented by point cloud and simulate a home-made controllable camera
https://github.com/Gozea/donutcpp

Raycaster
Casting rays in a given POV and displaying obstacles according to their distance
https://github.com/Gozea/Raycaster

Metaballs
Display shapes given their implicit function with the marching square algorithm for computer-efficiency
https://github.com/Gozea/Metaballs