

Valentin Gabeur

PH.D. STUDENT

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Work Experience

Google & Inria

Grenoble, France

PH.D. STUDENT

Feb 2019 - Feb 2022 (3 years)

- Developed a novel pre-training approach and a cross-modal architecture for the task of **text-to-video** retrieval. Obtained **state-of-the-art** results on 6 public datasets and won **1st place in the CVPR 2020 Video Pentathlon** (a video retrieval competition).
- Solved **large-scale** parallelism engineering challenges to train models on 200TB (15 years) of videos with 128 TPU v3 cores using the Jax framework. Ran experiments on both Google Cloud Platform (GCP) and Google internal production cluster.
- Open-sourced** the code and models for our Multi-Modal Transformer.
- My research led to **publications** at ECCV-20, WACV-22 and INTERSPEECH-22.

Inria

Grenoble, France

RESEARCH INTERN

Apr 2018 - Jan 2019 (10 months)

- Generated a semi-synthetic **dataset** of 3D captures in a virtual environment.
- Proposed a parameter-free **3D shape representation** for estimating human meshes from an image. **Publication** at ICCV-19.

Addition Manufacturing Technologies

Toulouse, France

PROJECT MANAGER

Apr 2016 - Jul 2017 (1.5 year)

- Responsible for the development of a new robotic tube bender.
- Study and design of innovative engineering concepts. Parts machining and assembly follow-up at subcontractors.
- Installation at customers facility, after-sales support. Coordination of US & Europe teams.

Addition Manufacturing Technologies

San Diego, USA

MECHANICAL ENGINEER

Apr 2013 - Mar 2016 (3 years)

- Assembly and setup of robotic tube-bending cells. Optimization of machine design. Kuka robots programming.
- After sales support, maintenance at customers facility.
- Technical support to sales. Presentation and promotion of the equipments at Fabtech shows.

Flabeg Holding GmbH

Shanghai, China

MECHANICAL ENGINEER

Oct 2011 - Oct 2012 (1 year)

- Designed new equipment for the production of automotive mirrors.

Ensival-Moret

Shanghai, China

LEAN ENGINEER TRAINEE

Mar 2011 - Aug 2011 (6 months)

- Identified workshop problems and implemented actions reducing the throughput time and improving the pumps manufacturing process.

Education

Grenoble-Alpes University

Grenoble, France

PH.D. IN COMPUTER SCIENCE

Feb 2019 - Present

- Thesis subject: Cross-modal learning for scene understanding.
- Supervisors: Cordelia Schmid, Kartteek Alahari.
- Computer vision, Natural language processing, Machine learning.

Paul-Sabatier University

Toulouse, France

M.Sc. IN ROBOTICS: DECISION AND CONTROL

2017 - 2018

- Machine-learning, Optimisation & Estimation, 3D Perception, Industrial & Mobile robotics. - **Rank 1/18**

ICAM

Lille, France

M.Sc. IN ENGINEERING

2006 - 2011

- Mechanical engineering, Automation, Computer science, Manufacturing, Project management. - **Rank 1/96**

Skill and tools

- **Programming:** Python, C/C++, Matlab.
- **Deep Learning:** Jax, PyTorch, Tensorflow.
- **Tools:** Linux, Vim, Tmux, Git, LaTeX, GCP, Blender, Solidworks.
- **Languages Spoken:** French (native), English (fluent), Spanish (fluent), Chinese (basics).

Publications

 scholar.google.com

[1] AVATAR: UNCONSTRAINED AUDIOVISUAL SPEECH RECOGNITION.

Valentin Gabeur, Paul Hongsuck Seo, Arsha Nagrani, Chen Sun, Karteek Alahari and Cordelia Schmid.
INTERSPEECH 2022

[2] MASKING MODALITIES FOR CROSS-MODAL VIDEO RETRIEVAL.

Valentin Gabeur, Arsha Nagrani, Chen Sun, Karteek Alahari and Cordelia Schmid.
WACV 2022

[3] MULTI-MODAL TRANSFORMER FOR VIDEO RETRIEVAL.

Valentin Gabeur, Chen Sun, Karteek Alahari and Cordelia Schmid.
ECCV 2020 (Spotlight)

[4] CVPR 2020 VIDEO PENTATHLON CHALLENGE: MULTI-MODAL TRANSFORMER FOR VIDEO RETRIEVAL.

Valentin Gabeur, Chen Sun, Karteek Alahari and Cordelia Schmid.
CVPR 2020 Video Pentathlon Challenge Workshop - 1st place

[5] MOULDING HUMANS: NON-PARAMETRIC 3D HUMAN SHAPE ESTIMATION FROM SINGLE IMAGES.

Valentin Gabeur, Jean-Sebastien Franco, Xavier Martin, Cordelia Schmid and Gregory Rogez.
ICCV 2019