

# Guillem Brasó

+34 645 56 32 01 | [guillem.braso@tum.de](mailto:guillem.braso@tum.de) | [github.com/gbraso](https://github.com/gbraso) | [dvl.in.tum.de/team/braso/](https://dvl.in.tum.de/team/braso/)

## RESEARCH INTERESTS

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I have a general interest in Machine Learning and Computer Vision. Some of the tasks I focus on are detection, segmentation, tracking and human pose estimation. I am also broadly interested in leveraging ideas from classical graph-based approaches and optimization in combination with deep learning to solve vision problems.

## EDUCATION

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### Technical University of Munich

*PhD in Computer Science. Advisor: Laura Leal-Taixé.*

Munich, Germany

October 2020 – Present

### Technical University of Munich

*MSc in Mathematics. Focus on Machine Learning and Discrete Optimization.*

Munich, Germany

April 2019 – September 2020

### University of California at Davis

*Semester abroad to complete my BSc. minor in Computer Science.*

Davis, USA

September 2017 – December 2017

### University of Barcelona

*BSc in Mathematics. Minor in Computer Science.*

Barcelona, Spain

September 2013 – June 2018

## EXPERIENCE

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### Research Assistant

*Technical University of Munich*

October 2020 – Present

Munich, Germany

- Leading research projects on segmentation, tracking and human pose estimation.
- Supervising two MSc thesis (one finished) on human pose estimation and tracking.
- Teaching assistant for *Advanced Deep Learning in Computer Vision* (IN2364) and *Computer Vision III: Detection, Segmentation and Tracking* (IN2375).

### Student Research Assistant (*HiWi*)

*Technical University of Munich*

April 2019 – September 2020

Munich, Germany

- Developed a novel graph neural network-based tracking algorithm, published as oral at CVPR2020.
- Prepared coursework material for several computer vision and deep learning courses.

### Research Intern

*Technical University of Munich*

June 2018 – August 2018

Munich, Germany

- Created a web-based annotation tool to allow radiologists to label videos of videofluoroscopic swallowing.
- Developed neural networks for the diagnosis of aspiration on the aforementioned videos.

### Data Analyst Intern

*Kernel Analytics*

January 2018 – May 2018

Barcelona, Spain

- Developed a data processing pipeline and a learning-based algorithm for sales forecasting for a retail client.

## PUBLICATIONS AND PREPRINTS

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- **G. Brasó**, O. Cetintas, L. Leal-Taixé. *Multi-Object Tracking and Segmentation via Neural Message Passing*. In submission to *International Journal of Computer Vision (IJCV)*. 2021.
- **G. Brasó**, N. Kister, L. Leal-Taixé. The Center of Attention: Center-Keypoint Grouping via Attention for Multi-Person Pose Estimation. *International Conference on Computer Vision (ICCV)*. 2021.
- M. Fabbri, **G. Brasó**, G. Maugeri, O. Cetintas, R. Gasparini, A. Osep, S. Calderara, L. Leal-Taixé, R. Cucchiara. MOTSynth: How Can Synthetic Data Help Pedestrian Segmentation and Tracking?. *International Conference on Computer Vision (ICCV)*. 2021.
- **G. Brasó**, L. Leal-Taixé. Learning a Neural Solver for Multiple Object Tracking. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 2020. **(Oral presentation)**.

## SKILLS

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**Languages:** English (fluent), Spanish (native), Catalan (native), German (beginner, A1.2).

**Programming Languages:** Python (advanced), SQL (beginner), C/C++ (beginner).

**Libraries:** PyTorch, PyTorch Geometric, Pytorch Lightning, NumPy, Pandas.