

# Guillaume Jeanneret Sanmiguel

## Curriculum Vitae

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### About me

**Summary** I am a Biomedical Engineer from Los Andes University, with two minors: one in Mathematics and the other in Computational Mathematics. I obtained my Master's Degree at Los Andes University as well. I specialized my work on Machine Learning techniques, specially on Deep Learning (DL) tools. I have a strong basis on Programming, Mathematics and Machine Learning. I am an experienced user of the Pytorch library, frequently used on the Computer Vision research community. Currently, I work at the CinfonIA research group led by Professor Pablo Arbeláez at the Universidad de los Andes.

**Areas of Interest** Computer Vision, Deep Learning, Unsupervised Machine Learning, Robust Machine Learning, Applied Mathematics and Mathematical Modelling.

**Nationalities** Colombian and Swiss

### Education

2018–2020 **M.Sc. in Biomedical Engineering**, *Department of Biomedical Engineering, Universidad de los Andes, Bogotá, Colombia.*

2013–2018 **B.Sc. Biomedical Engineering**, *Department of Biomedical Engineering, Universidad de los Andes, Bogotá, Colombia.*

2018 **Minor Mathematics and Computational Mathematics**, *Department of Mathematics, Universidad de los Andes, Bogotá, Colombia.*

2013 **Maturité Suize Degree (Math and Physics emphasis)**, *Helvetia School, Bogotá, Colombia.*

2013 **High School Degree**, *Helvetia School, Bogotá, Colombia.*

### Published Papers

ECCV 2020 Gabor Layers Enhance Network Robustness

### Research Projects

medRXiv Smart Pooling: AI-powered COVID-19 testing.

M.Sc. Thesis MINT: Multi Instance Network, an Efficient Framework for Video Object Segmentation.

arXiv MAIN: Multi Attention Instance Network.

MTBI Project The Dynamics of Math Anxiety as it is Transferred through Peer and Teacher Interactions.

### Internships

Summer 2017 MTBI – Research Experience for Undergraduates at the Arizona State University

## Experience

- 01/18 - Present    Researcher at the Biomedical Computer Vision Group.
- 01/20-11/20    Graduate Research Assistant at the Universidad de los Andes
- 01/19-12/19    Graduate Research Assistant: Video Analysis
- Research focused on the task One-Shot Video Object Segmentation.
  - International Conference paper writing.
- 07/18-12/18    Graduate Teaching Assistant: Processing and Image Analysis
- Laboratory Instructor - 80 students in charge.
  - Designing and grading laboratory guides.
  - Final project grading.
- 01/18-06/18    Graduate Teaching Assistant: Scientific Programming
- Laboratory Instructor - 65 students in charge.
  - Designing and grading laboratory guides.
  - Final project grading.
- 07/17-12/17    Undergraduate Teaching Assistant: Processing and Image Analysis
- Helping assistant for the lectures.
- 01/16-12/17    Undergraduate Teaching Assistant: Accompaniment Program
- Helping first semester students with courses such as: Differential Calculus, Programming, Physics, Chemistry and personal development.
- 07/15-12/15    Undergraduate Teaching Assistant: Algorithm and Object Oriented Programming
- Grading projects and assisting with laboratory Java tutorials.

## Technical Skills

Programming    PYTHON (Advanced), MATLAB (Advanced)

Software    L<sup>A</sup>T<sub>E</sub>X, MS WORD, MS EXCEL, MS POWERPOINT

DL    Pytorch

Framework

## Languages

Spanish    Native

English    Fluent

French    Fluent (Swiss *Maturité*)