

# Guillaume Jeanneret Sanmiguel

## Curriculum Vitae

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### About me

**Summary** I am a M.Sc. in Biomedical Engineering from the Universidad de los Andes and as well as a Biomedical Engineer with a minor in Mathematics and Computer Science from the Universidad de los Andes, Bogotá, Colombia. I have knowledge on Machine Learning, specially on Deep Learning, and Applied Mathematics. I have a strong basis on Programming, Mathematics and Machine Learning, specially Deep Learning (DL) using the PyTorch framework. Currently, I work at the Biomedical Computer Vision Group led by Professor Pablo Arbeláez at the Universidad de los Andes.

**Areas of Interest** Computer Vision, Deep Learning, Probability, Statistics, Applied Mathematics and Mathematical Modelling.

**Nationalities** Colombian and Swiss

### Experience

Researcher at the Biomedical Computer Vision Group.

2019/01–12 Graduate Research Assistant: Video Analysis

- Research focused on the task One-Shot Video Object Segmentation.
- International Conference paper writing.

2018/07–12 Graduate Teaching Assistant: Processing and Image Analysis

- Laboratory Instructor - 80 students in charge.
- Designing and grading laboratory guides.
- Final project grading.

2018/01–06 Graduate Teaching Assistant: Scientific Programming

- Laboratory Instructor - 65 students in charge.
- Designing and grading laboratory guides.
- Final project grading.

2017/07–12 Undergraduate Teaching Assistant: Processing and Image Analysis

- Helping assistant for the lectures.

2016/01–  
2017/12 Undergraduate Teaching Assistant: Accompaniment Program

- Helping first semester students with courses such as: Differential Calculus, Programming, Physics, Chemistry and personal development.

2015/07–12 Undergraduate Teaching Assistant: Algorithm and Object Oriented Programming

- Grading projects and assisting with laboratory Java tutorials.

## 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 Computer Science**, *Department of Biomedical Engineering, Universidad de los Andes, Bogotá, Colombia.*

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

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

## Projects

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

MAIN: Multi Attention Instance Network – One-Shot Video Object Segmentation using Deep Learning. Available on arXiv.

Robust Gabor Networks – Robustness properties on architectural layers. Available on arXiv.

MTBI The Dynamics of Math Anxiety as it is Transferred through Peer and Teacher Interactions – A mathematical model to analyse the transfer of math anxiety

## Academic Courses

2018/07–12 Advanced Machine Learning

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

2017/01–06 Computer Vision

## Technical Skills

Programming PYTHON, MATLAB

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