

# GUSTAVO FÜHR

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Porto Alegre - Brazil

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## PROFILE (TL;DR)

I began my career in Computer Vision in 2009 while simultaneously pursuing a dual undergraduate degree in France, focused on template tracking for AR. Since then, I've completed a master's degree in Human Pose Estimation and a Ph.D. in Pedestrian Tracking and Collective Behavior Recognition. In 2015, I co-founded a company that created many CV solutions, including OCR, face biometrics, logo detection and license plate recognition. A couple of years ago this company was acquired (acquired) by an unicorn startup.

## EXPERIENCE

### Senior ML Engineer; Unico ID Tech — 2020-2024

- Working as the ML tech lead for large-scale face recognition and liveness systems, building models based on state-of-the-art algorithms.
- Manage most of the Machine Learning initiatives of the company creating internal challenges, experiments/code standards.
- Responsible for the ML tech roadmap and the company's partnership with the university.

**Skills:** PyTorch, Keras, Tensorflow, Google Cloud Platform, Python, Deep Learning and Statistical Data Analysis.

### ML Engineer, CTO (co-founder); Meerkat — 2015-2020

Co-founded a startup focused in Computer Vision products. Worked as a lead developer (back-end/front-end and ML) creating different systems that went to production:

- Face Recognition/Liveness models and API scalable to millions of images;
- OCR for text documents (text detection/recognition, NLP, Key Information Extraction);
- Object detection (logo, license plate recognition)

These technologies help the company to be acquired by an unicorn Brazilian startup Unico ID Tech.

**Skills:** Deep Learning, CNN, Keras, C++, Python, Flask, Docker.

### **Software Engineer; RBS — 2013-2015**

Back-end building large scalable systems for content recommendation. Worked in projects involving BigData, DataScience and Machine Learning.

**Skills:** RabbitMQ, Postgres, ElasticSearch, noSQL databases, Node.js and Python.

### **Computer Vision Researcher, Thales Group, France — two internships, 2010;2011**

*Monocular Human 3D Pose Estimation*, Master's Degree. Proposed a method based on Annealed Particle Filtering and Principal Component Analysis.

*3D Tracking for an Augmented Reality System*, Undergraduate project. Method based in SIFT and Efficient Second-order Minimization for tracking. Implemented in GPU with custom Cuda kernels.

**Skills:** MATLAB, C++ and Cuda

## **EDUCATION**

### **PhD. In Computer Science — UFRGS, Porto Alegre, Brazil; 2012-2016**

PhD. in Computer Vision at UFRGS. thesis entitled *Pedestrian Tracking and Collective Behavior Recognition*.

### **Master's Degree — Ensimag, Grenoble, France; 2010-2011**

Masters at Ensimag, GVR (Graphics, Vision and Robotics), work entitled *Monocular Human 3D Pose Estimation*.

### **Undergraduate Double Degree — Ensimag/UFRGS; 2006-2011**

Computer Science at UFRGS and Computer Engineering at ENSIMAG (specialization Ingénierie des Systèmes). Undergraduate thesis *3D Tracking for an Augmented Reality System*, mention: *très bien*.

## **LANGUAGES**

Portuguese: native, English: proficiency (TOEIC: 980/990) and French: working proficiency

## **PUBLICATIONS**

You can find my list of publications at Google Scholar: <https://scholar.google.com/citations?user=7GhmPWgAAAAJ&hl=en&oi=ao>