



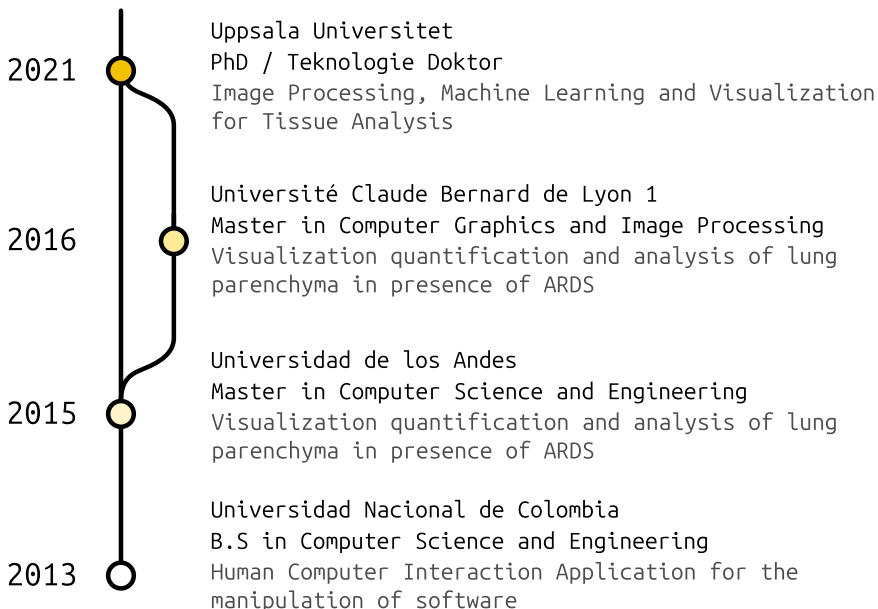
LESLIE SOLORZANO

Computer Scientist and Engineer, Visualization expert

Current work

Department of Immunology Genetics and Pathology
Uppsala University Postdoctoral Researcher

Education



Contact

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🌐 lesliemachine.se

🌐 linkedin.com/in/lesolorzanov

🆔 [0000-0001-8658-6417](tel:0000-0001-8658-6417)

Skills

Python, Pytorch, AI, Javascript, PHP, Java, Matlab, Pytorch, Scikit-learn Pandas, MySQL, MongoDB, Linux, Windows, Blender, D3, Seaborn.

These are some of the tools in my belt. I am continuously learning more!

Human languages

Spanish



It's a little difficult to know absolutely everything about a language. Even if it is your native one

English



Studied all my life since I was 3.

French



Last certified level B2. I did take a master program in this language and lived in France. I guess I can say I know a little

Swedish



Learning on my own. Learning constantly by living and working in Sweden

Grants and awards

Karolinska Institutet
KID - Partial funding of Doctoral Education at Karolinska institutet 2022
Cosupervisor of PhD student 2024-2028

Selected publications



The ACROBAT 2022 Challenge: Automatic Registration Of Breast Cancer Tissue
Medical Image Analysis
P Weitz*, M Valkonen*, **L Solorzano***, ... , M Rantalainen

Improved breast cancer histological grading using deep learning
Annals of oncology
Y Wang, B Acs, S Robertson, B Liu, **L Solorzano**, C Wählby, J Hartman, M Rantalainen

Artificial intelligence for diagnosis and grading of prostate cancer in biopsies: a population-based, diagnostic study
The Lancet Oncology
P. Ström, K. Kartasalo, H. Olsson, **L. Solorzano**, B. Delahunt, et al.

TissUMaps: Interactive visualization of large-scale spatial gene expression and tissue morphology data
Bioinformatics - OUP
L. Solorzano, G. Partel, C. Wählby



All publications

As seen in Google Scholar

- 2024 The ACROBAT 2022 Challenge: Automatic Registration Of Breast Cancer Tissue
P Weitz*, M Valkonen*, L Solorzano*, C Carr, K Kartasalo, C Boissin, ... , M Rantalainen
Medical Image Analysis
- 2024 Ensemble-based deep learning improves detection of invasive breast cancer in routine histopathology images
L Solorzano, S Robertson, B Acs, J Hartman, M Rantalainen
Heliyon
- 2023 A multi-stain breast cancer histological whole-slide-image data set from routine diagnostics
P Weitz*, M Valkonen*, L Solorzano*, C Carr, K Kartasalo, C Boissin, ... , M Rantalainen
Nature Scientific Data
- 2022 Improved breast cancer histological grading using deep learning
Y Wang, B Acs, S Robertson, B Liu, L Solorzano, C Wählby, J Hartman, M Rantalainen
Annals of oncology
- 2022 Comparison of East-Asia and West-Europe cohorts explains disparities in survival outcomes and highlights predictive biomarkers of early gastric cancer aggressiveness
C Pereira, JH Park, S Campelos, I Gullo, C Lemos, L Solorzano et al.
International Journal of Cancer
- 2021 Image Processing, Machine Learning and Visualization for Tissue Analysis (PhD Thesis)
L Solorzano - May 12th 2021 - [Link to video](#)
Acta Universitatis Upsaliensis
- 2021 Machine learning for cell classification and neighborhood analysis in glioma tissue
L Solorzano, L Wik, T Olsson Bontell, Y Wang, AH Klemm, J Öfverstedt, ...
Cytometry Part A
- 2020 Automated identification of the mouse brain's spatial compartments from in situ sequencing data
G Partel, MM Hilscher, G Milli, L Solorzano, AH Klemm, M Nilsson, C Wählby
BMC biology
- 2020 TissUmaps: Interactive visualization of large-scale spatial gene expression and tissue morphology data
L Solorzano, G Partel, C Wählby
Bioinformatics
- 2020 Towards automatic protein co-expression quantification in immunohistochemical TMA slides
L Solorzano, C Pereira, D Martins, R Almeida, F Carneiro, GM Almeida, ...
IEEE journal of biomedical and health informatics
- 2020 Transcriptome-Supervised Classification of Tissue Morphology Using Deep Learning
A Andersson, G Partel, L Solorzano, C Wählby
2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)
- 2020 Artificial intelligence for diagnosis and grading of prostate cancer in biopsies: a population-based, diagnostic study
P Ström, K Kartasalo, H Olsson, L Solorzano, B Delahunt, DM Berney, ...
The Lancet Oncology
- 2019 Deep learning in image cytometry: a review
A Gupta, PJ Harrison, H Wieslander, N Pielawski, K Kartasalo, G Partel, L Solorzano ...
Cytometry Part A

- 2019 Voxel-wise assessment of lung aeration changes on CT images using image registration: application to acute respiratory distress syndrome (ARDS)
M Orkisz, AM Pinzón, JC Richard, C Guérin, [L Solorzano](#), DF Sicaru, ...
International journal of computer assisted radiology and surgery
- 2019 Quality Assurance and Local Regions for Whole Slide Image Registration.
[L Solorzano](#), C Wählby
Journal of Pathology Informatics
- 2018 Whole slide image registration for the study of tumor heterogeneity
[L Solorzano](#), GM Almeida, B Mesquita, D Martins, C Oliveira, C Wählby
Computational pathology and ophthalmic medical image analysis
- 2017 Decoding gene expression in 2D and 3D
M Bombrun, P Ranefall, J Lindblad, A Allalou, G Partel, [L Solorzano](#), ...
Scandinavian Conference on Image Analysis
- 2012 Software Visualization to Simplify the Evolution of Software Systems
D Montaña, [L Solorzano](#), HR Umaña-Acosta
Research topics in software evolution and maintenance

Academic experience

2009-2026

{Research groups}

- 🇺🇸 Vicković Innovation Lab (UU-NYGC) Immunology Genetics and Pathology (Python, JS, AI and visualization)
- 🇫🇮 Rantalainen Group (KI) Medical Epidemiology and Biostatistics (Python, JS, AI and visualization)
- 🇸🇪 Wählby Lab (UU) Visual Information and Interaction (Python, JS, AI and visualization)
- 🇧🇪 CREATIS (UCBL) - Medical image processing lab (C++)
- 🇪🇸 IMAGINE (UNIANDES) - Visualization, computer graphics and robotics lab (C++, shell)
- 🇪🇸 BioIngenium (UNAL) - Bioengineering research group (Matlab, C++)
- 🇪🇸 CoLSWE (UNAL) - Software Engineering Colective (Java)
- 🇪🇸 EIDOS (UNAL) - Linux and free software research group. (Unix)

2011-2022

{Teaching}

- ◆ Deployment of analytics solutions in Big Data (CO remote) 2022
- ◆ Scientific Data Visualization (SE) 2020
- ◆ Computer Graphics (SE) 2017-2018-2019-2020
- ◆ Programming Design and Data Structures (SE) 2017
- ◆ Image Processing (CO) 2015
- ◆ Software Engineering (CO) 2011
- ◆ Computer programming (C++) (CO) 2011

2016-2021

{Main project} {PhD program} {Sweden}

- ◆ TissUMaps: Develop computational methods to combine spatially resolved information on tissue morphology with in situ RNA sequencing and protein detection and efficient visualization of results (Python, HTML, javascript)
- ◆ Reviewer ICASSP 2017, ISBI 2018-2019-2020
- ◆ Participated in the Deep learning bootcamp at Max Planck Institute 2018
- ◆ Participated in the QuPath - Computational Pathology workshop at EPFL
- ◆ Information system for the Center for Image Analysis and annual report generation and edition

2016-2021

{Presentations} {PhD program} {Sweden}

- ◆ EMBO-EMBL (2019): Seeing is believing imaging the molecular processes of life, Symposium Presented: lightning talk, Poster: Exploratory analysis and visualization of in-situ sequencing data
- ◆ SOFOSKO (2019): Talk at research summer school: Image analysis for microscopy, into the private life of tissue
- ◆ Soapbox Uppsala (2019): Women in STEM, popular science public presentation
- ◆ STorM (2019): The Swedish Tumor Microenvironment Meeting: Image analysis for the study of tumor micro environments
- ◆ MICCAI (2018): International Workshop on Ophthalmic Medical Image Analysis: Whole Slide Image Registration for the Study of Tumor Heterogeneity
- ◆ SOFOSKO (2018): Talk at research summer school: Image analysis for digital histopathology for personalized cancer treatment

2013-2015

{Project involvement} {Master Degree} {Colombia}

- ◆ Encuentro BigData 2015. Project for citizen public data acquisition, treatment and display for the Technology Ministry. (PHP, MongoDB, Python)
- ◆ WEBSIS project, website for the systems engineering department at Andes University and CMS module development (joomla, wordpress).
- ◆ Support and maintenance of Linux servers, IMAGINE laboratory, Uniandes. (Fedora)

2007-2012

{National University of Colombia} {Undergraduate program}

- ◆ Computer Science and Engineering - Programming, software engineering, mathematics, information theory
- ◆ Application for the manipulation of software graphical environments - Undergraduate thesis (Java)
- ◆ New Trends in Software Maintenance and Evolution - Extracurricular course (Java)
- ◆ Trends, design and display in new generation information systems - Extracurricular course. (C++)

Work experience

Sweden
{2024-2026}

Vicković Innovation Lab - Department of Immunology Genetics and Pathology
Uppsala University - Postdoctoral researcher

Sweden
{2022-2024}

Rantalainen Group - Department of Medical Epidemiology and Biostatistics
Karolinska Institutet - Postdoctoral researcher

Sweden
{2021-2022}

Centrum för Bildanalys and Wählby Lab
Research Engineer - Forskningsingenjör

Sweden
{2016-2021}

Department of Information Technology - Wählby Lab
Uppsala University - PhD Researcher

Colombia
{2015-2016}

IMAGINE computer vision and robotics group
Research engineer and linux system administrator

France
{2013-2014}

CREATIS Biomedical Imaging Research Lab
Master student - Medical image registration

United States
{2012}

University of Delaware
Summer research program at the Computer Science department
Software testing methodologies (JVM)

Colombia
{2007-2009}

National University of Colombia
International affairs office
Webmaster and support engineer (JSP)

Hobbies and interests

ThreeJS, OpenGL, WebGL, Blender, Inkscape
Angular, Javascript
General purpose programming in Python, Javascript
Volunteer teaching in local school

