

# Margarita Geleta

margaritageleta.github.io

geleta@berkeley.edu

+1 (949) 992 7053

## PARTICULARS

---

### EDUCATION

- 2022-present**    **University of California, Berkeley**  
*Ph.D. in Computer Science*
- **Courses (letter graded):** *Machine Learning, Deep Neural Networks, Computer Vision, Security in Computer Systems, Natural Language Processing, User Interface Design and Development;*
  - (pass/no pass):** *Theoretical Statistics;* **(audited):** *Introduction to Computer Vision and Computational Photography;* **(seminars):** *Research to Startup Seminar.*
  - **Haas School of Business Courses (letter graded):** *Leading High Impact Teams; Lean Transfer (Lean Startup); Negotiations and Conflict Resolution.*
- 2021-2022**    **University of California, Irvine (UCI)**  
*Ph.D. in Computer Science (transferred)*
- **Courses (letter graded):** *Artificial Intelligence, Scientific Computing, Machine Learning, Probabilistic Learning, Fundamentals of the Design and Analysis of Algorithms, Computational Methods in Genomics, Neural Networks & Deep Learning, Brain-Inspired Learning;* **(seminars):** *Seminars in Computer Science Research.*
- 2017-2021**    **Universitat Politècnica de Catalunya (UPC)**  
*Bachelor of Data Science and Engineering*
- Active member in the *Barcelona School of Informatics (FIB)* governance.
  - **Courses (letter graded):** *Data Analysis, Machine Learning, Mathematical Optimization, Deep Learning, Parallelism and Discrete Systems, Database Systems, Information Visualization, Information Retrieval and Analysis, Algorithmics, Statistics.*

### RESEARCH INTERESTS

My research interests span the areas of *deep learning* and *computer vision*. I have a specific interest in *generative modelling*, and *deep learning* applied to *population genetics* and *genealogy*.

### EXPERIENCE

---

#### RESEARCH EXPERIENCE

- 2022-present**    **NI Lab (UC Berkeley, co-advised by Stanford University)**  
Aug. 2022 - present
- Graduate Student Researcher (Berkeley, CA)**
- Published and showcased research at the *Conference on Neural Information Processing Systems (NeurIPS)* 2023 [Pub8], *Deep Learning Barcelona Symposium (DLBCN)* 2023, *American Society of Human Genetics (ASHG)* meetup 2022 [Abs3].
- 2021-2022**    **Engaging Technology and Application Design Lab (UC Irvine)**  
Oct. 2021 - Aug. 2022
- Graduate Student Researcher & Teaching Assistant (Irvine, CA)**
- Maintainer of the NSF-funded *Maestro* project [Pub4], providing a service for cybersecurity educational purposes in the domain of adversarial attacks and defenses.
  - Teaching Assistant in CS 175 (Project in AI): 147 undergraduate students.

- 2021**  
Jun. 2021 -  
Sept. 2021
- Bustamante Lab (Stanford University)**  
*Full-time Research Assistant (Remote)*
- Published and showcased research at [TBA journal] [Pub7], and the *American Society of Human Genetics (ASHG)* meetup 2021 [Abs2].
- Feb. 2021 -  
Jun. 2021
- Part-time Research Intern (Remote)*
- Conducted my Bachelor Thesis “*Unsupervised Learning with Applications in Genomics*” [Ths1].
- 2020-2021**  
Sept. 2020 -  
Mar. 2021
- Image Processing Group (GPI)**  
*Independent Researcher (Barcelona, Spain)*
- Published and showcased research at the *Women in Computer Vision* workshops (in conjunction with the *Conference on Computer Vision and Pattern, CVPR-WiCV*) 2021 [Abs1] and 2022 [Abs5], and the *International Conference on Acoustics, Speech, & Signal Processing (ICASSP)* 2022 [Pub3].

## PROFESSIONAL EXPERIENCE

- 2024**  
May 2024 -  
Aug. 2024
- [Upcoming] Dolby Laboratories, Inc.**  
*Sound Tech R&D Intern @ Advanced Technology Group (San Francisco, CA)*
- [TBD] Early-stage conceptual models.
- 2024**  
Jan 2024 -  
present
- Alumni Ventures (AV)**  
*Ventures Scout (San Francisco, CA)*
- The AV Venture Scout program is an extensive network of independent angels, entrepreneurs, and connectors. Venture Scouts share attractive investment opportunities with AV.
- 2022-2023**  
May 2023 -  
Aug. 2023
- Amazon.com**  
*Applied Scientist @ Home Innovation Team (Seattle, WA)*
- Worked with large-scale Generative Models (GANs, diffusion models), GAN inversion techniques and image-to-image translation.
- Jun. 2022 -  
Aug. 2022
- Applied Scientist @ Home Innovation Team (Seattle, WA)*
- Worked with large-scale Generative Models (GANs), GAN inversion techniques [Pub6] and deep harmonization.
- 2021**  
Jun. 2021 -  
Jul. 2021
- UPC School of Professional & Executive Development (UPC School)**  
*Reinforcement Learning Teaching Assistant (Barcelona, Spain)*
- 2019-2021**  
Oct. 2020 -  
Sept. 2021
- JEDI Junior Enterprise (JEDI UPC)**  
*President (Barcelona, Spain)*
- Had the honor to present the candidature and receive a prize of €1,000 for the best *Student Association in Education* at the *Polytechnic University of Catalonia (UPC)*.
  - Arranged collaborations with other associations from the *Polytechnic University of Catalonia (UPC)* and with organizations from the JE Network, at National and European levels, such as CEJE – the *Spanish Confederation of Junior Enterprises*, and *Junior Enterprises Europe (JEE)*.

Feb. 2020 - Jun. 2021	<b><i>Instructor at 40-hour Machine Learning and Python course (Barcelona, Spain)</i></b>  · Adapted the course for online teaching due to the coronavirus pandemic and tutored students through online platforms. · Adapted materials for a blind student and guided them throughout the course.
Aug. 2019 - Jun. 2021	<b><i>Front-end developer (Barcelona, Spain)</i></b>
Sept. 2019 - Oct. 2020	<b><i>Vice-President &amp; Secretary (Barcelona, Spain)</i></b>  · Directed the organization of JEDI Academy courses, Winter edition 2020. · Organized bimonthly workshops on Tech topics with +20 attendees at the <i>Barcelona School of Informatics</i> (FIB). Ran introductory R language workshop. · Represented the Junior Enterprise in several Tech & startup events, such as <i>Tech Spirit Barcelona</i> and <i>SmartMobility Congress</i> .
Jun. 2019 - Feb. 2020	<b><i>Teaching Assistant at 40-hour Machine Learning and Python course (Barcelona, Spain)</i></b>
<b>2018-2021</b> Nov. 2020 - Jul. 2021	<b>FIB Visiona</b>  <b><i>President &amp; Main Organizer (Barcelona, Spain)</i></b>  · Donated €7,500 on scholarships for <i>Barcelona School of Informatics</i> ' students and approved to donate €12,000 on more scholarships for the academic year 2021-2022.
Oct. 2018 - present	<b><i>Co-founder &amp; Board Member (Barcelona, Spain)</i></b>  · Co-founded FIB Visiona association, in charge of connecting UPC students with Tech companies.

## VOLUNTEERING

<b>2022-2024</b> Oct. 2023 - May 2024	<b>UC Berkeley</b>  <b><i>Social Chair at Computer Science Graduate Entrepreneurs (CSGE) (Berkeley, CA)</i></b>  · In charge of organizing mixers to collect ideas, experience, and connections that transfer from generation to generation of entrepreneurial Berkeley CS graduate students and alumni.
Sep. 2023 - Dec. 2023	<b><i>Berkeley AI Research (BAIR) undergraduate mentor (Berkeley, CA)</i></b>  · Mentorship program to encourage, inspire, and support undergraduates in embarking on a career in research, and more generally support students who aim for a career in AI, research or otherwise.
Oct. 2022 - Nov. 2022	<b><i>Reviewer for the Equal Access to Application Assistance (EAAA) Program (Remote)</i></b>  · Helped equalizing access guidance on the higher degree application process.
<b>2017-2020</b> Oct. 2018 - Aug. 2021	<b>Universitat Politècnica de Catalunya (UPC)</b>  <b><i>Student representative at the Standing Committee (Barcelona, Spain)</i></b>  · Elected by <i>Barcelona School of Informatics</i> ' Board members. The Standing Committee is the executive and permanent representative of the School Board. Responsibilities included discussing the most important decisions of the School.
Oct. 2018 - Aug. 2021	<b><i>Student representative at the School Board (Barcelona, Spain)</i></b>  · Elected by <i>Barcelona School of Informatics</i> ' student body. The School Board is the governing body of the School. The main responsibility was to represent the opinion of all the students from the School.

Summers 2018, 2019	<i>Assistant at the Summer Course of Algorithmics and Programming (Barcelona, Spain)</i>
Oct. 2017 - Mar. 2019	<i>Student representative at CAGCED (Barcelona, Spain)</i>
	· Member and first student representative at the <i>Academic Committee of the Data Science and Engineering Degree (CAGCED)</i> .

## HONORS & AWARDS

---

<b>2024 Grant</b>	Berkeley Chapter of Sigma Xi Grant-in-Aid-of-Research (GIAR) for a proposal on a foundational model for precision medicine (\$700).
<b>2024 Award</b>	1st place at the AGI House hackathon on LLM & Vector Search by MongoDB.
<b>2023 Scholarship</b>	Samuel Silver Memorial Scholarship for research in genealogy (\$1,000).
<b>2022 Award</b>	BAIR First Year Research Ignition Award (\$5,000).
<b>2022 Award</b>	1st place at the Associated Graduate Students (AGS) Symposium 2022 at UCI in the “ <i>Astronomy, Physics, Math, Computer Science</i> ” track.
<b>2022 Fellowship</b>	Fellowship for CS Ph.D. program by the EECS Department, University of California, Berkeley.
<b>2021 Fellowship</b>	CS Department Dean’s Fellowship for AY 21/22, Donald Bren School of Information and Computer Sciences – in recognition of outstanding research potential (\$10,000).
<b>2021 Fellowship</b>	Fellowship for CS Ph.D. program by the Department of Computer Science, UC Irvine.
<b>2020 Award</b>	Represented and received the <i>Best Student Association in Education Award</i> at the Polytechnic University of Catalonia (UPC).
<b>2020 Award</b>	Received a “ <i>Matricula de Honor</i> ” academic honor for an excellent research project on Deep Audio Steganography.
<b>2020 Award</b>	Nominated for the <i>Dona TIC Award</i> (2nd place), as a recognition for my contributions to the STEM world of new technologies and as a role model to young women.
<b>2018 Award</b>	Received a “ <i>Matricula de Honor</i> ” academic honor for obtaining a 10/10 in the Parallelism and Distributed Systems course.
<b>2017 Award</b>	Awarded for the Best High School research project in <i>La Selva</i> about video game development, at the “ <i>TV Mostra de Treballs de Recerca</i> ”.
<b>2017 Award</b>	Finished High School with Honors (“ <i>Matricula de Honor</i> ” academic honor).

## MEMBERSHIPS

---

<b>2024-pres.</b>	Member of <i>Inception Studio</i> , a nonprofit accelerator and community for GenAI founders.
<b>2024-pres.</b>	Member of the <i>International Society of Genetic Genealogy (ISOGG)</i> .
<b>2021-pres.</b>	Member of the <i>American Society of Human Genetics (ASHG)</i> .
<b>2021-pres.</b>	Member of the <i>Computer Vision Foundation (CVF)</i> .
<b>2023-2024</b>	Associate member of the <i>Sigma Xi, The Scientific Research Honor Society (<math>\Sigma\Xi</math>)</i> .
<b>2022-2024</b>	Member of the <i>Association for Computing Machinery (ACM)</i> .
<b>2018-2020</b>	Member of the <i>Barcelona School of Informatics Student Delegation (DEFIB)</i> .
<b>2017-2018</b>	Member of the <i>TelecomBCN Student Delegation (DAT)</i> , of the <i>Barcelona School of Telecommunications Engineering (ETSETB)</i> .

## TALKS

---

<b>2024</b>	[Upcoming] <b>Interview at MongoDB TV</b> in San Francisco, CA: <i>From Hackathon to Startup</i> .
<b>2024</b>	[Upcoming] <b>Invited Speaker at Comet ML</b> in San Francisco, CA: <i>TBA</i> .
<b>2024</b>	<b>Invited Speaker at IdeaSoft AI Hub: State-of-the-Art GAN Inversion and Image Editing</b> .
<b>2024</b>	<b>Master of ceremonies at The AI Rabbit Hole – AI Conference</b> in San Francisco, CA.
<b>2024</b>	<b>Invited Speaker at IE Immersion Week by UC Berkeley SCET</b> in Berkeley, CA: <i>Emerging Technology: GenAI: “Three Cutting-Edge Use Cases for Generative AI”</i> .
<b>2024</b>	<b>Invited Speaker at Computer Visionaries Meetup by Leap Labs</b> in San Francisco, CA: <i>State-of-the-Art GAN Inversion and Image Editing</i> .

2024	Invited Speaker at the 1st DevOps for GenAI MongoDB hackathon in San Francisco, CA: <i>LLM embedding-based search within log files</i> .
2024	Invited Speaker at Women in Tech Meetup in San Francisco, CA: <i>AI + Population Genetics and Genealogy</i> .
2024	Live Roundtable Discussion at UC Berkeley in Berkeley, CA: <i>Demystifying PhD Programs</i> .
2023	Talk at DLBCN 2023 in Barcelona, Spain: <i>Adversarial Learning for Feature Shift Detection and Correction</i> .
2023	Talk at WiCSE Berkeley-Stanford Meetup 2023 in Berkeley, CA, USA: <i>Deep Steganography</i> .
2023	Invited Speaker at the Research Panel in Berkeley, CA, USA: <i>Machine Learning @ Berkeley</i> .
2023	Lightning Talk at AAAI 2023 in Washington, D.C., USA: <i>Maestro: A Gamified Platform for Teaching AI Robustness</i> .
2022	Talk at DLBCN 2022 in Barcelona, Spain: <i>PixInWav: Hiding Pixels in Audio</i> .
2022	Talk at AGS 2022 in Irvine, CA, USA: <i>PixInWav: Hiding Pixels in Audio</i> .
2021	Talk at Ioannidis Lab Summer Retreat in Stanford, CA, USA/virtual: <i>Autoencoders for Population Genetics</i> .
2021	Talk at Barcelona Google Developer Student Clubs: <i>Introduction to Machine Learning with DSC UPC</i> ( <a href="https://gdsc.community.dev/j/7m795shsefhsz/">https://gdsc.community.dev/j/7m795shsefhsz/</a> ).
2021	Live Roundtable Discussion at STEM Talks Menorca in Menorca, Spain/virtual, organized by Google Developers Group Menorca.
2019	Workshop Barcelona School of Informatics (FIB) in Barcelona, Spain: <i>Introduction to R</i> .

## REVIEWER SERVICE

---

2023	Reviewer at the <i>Women in Computer Vision Workshop</i> (WiCV) at the <i>IEEE/CVF Computer Vision and Pattern Recognition Conference</i> (CVPR).
------	---

## EVENTS ORGANIZED

---

2023 Apr. 19 <sup>th</sup>	<b>The AI Rabbit Hole – AI Conference</b> in San Francisco, CA: organizer of tier 1 AI conference with <b>+500 participants</b> (founders, VCs, corporate leaders, and researchers). Raised +\$70,000 in sponsorship (including DVC, AWS for Startups, Nebius AI, and Craft Ventures).
2023 Apr. 13-14 <sup>th</sup>	<b>The AI Rabbit Hole – Hackathon at the AGI House</b> in Hillsborough, CA: host of the <i>AI Wonderland Hackathon</i> with <b>+130 participants</b> . Raised +\$20,000 in sponsorship (including DVC, Tune AI, Craft Ventures).
2023 Nov. 24-26 <sup>th</sup>	<b>Techstars Startup Weekend SF AI</b> in San Francisco, CA: organizer of Techstars Startup Weekend on Thanksgiving weekend with <b>+150 participants</b> , 17 teams, 5 workshops, 2 talks (Doordash and Meta Research), 32 ideas pitched. Raised +\$10,000 in sponsorship.
2023 Nov. 17 <sup>th</sup>	<b>AI Nexus: From Research to Investment</b> in San Francisco, CA: organizer of a mixer of <b>+70 participants</b> comprising EECS PhD students from UC Berkeley, Haas MBA students, and founders from Berkeley SkyDeck), 5 panelists (founders from Berkeley SkyDeck + PhDs from UC Berkeley, and VC from Mayfield Fund). +\$6,000 funding for the event.
2021 May 3-7 <sup>th</sup>	<b>4-day FIB Visiona Spring Career Fair</b> in Barcelona, Spain: directed 10-people team for the second online edition of the FIB Visiona career fair with <b>+200 attendees</b> , 12 companies, 75 recruiters, and €23,000 in sponsorships raised.
2020 Dec. 8-10 <sup>th</sup>	<b>3-day FIB Visiona Fall Career Fair</b> in Barcelona, Spain: directed 4-people team for the first online edition of the FIB Visiona career fair with <b>+150 attendees</b> , 40 recruiters, and €12,000 in sponsorships raised.
2019 Oct. 11-13 <sup>th</sup>	<b>36-hour hackathon HackUPC</b> in Barcelona, Spain: led brand redesign in 30-person team for HackUPC 2019, Spain's largest and Europe's largest student hackathon with <b>+700 attendees</b> , 16 sponsors (including McKinsey & Company, Facebook, and Hewlett-Packard), with the support of the City Council of Barcelona.
2019 Apr. 10 <sup>th</sup>	<b>FIB Visiona Spring Career Fair</b> in Barcelona, Spain: co-directed 10-people team for the first edition of the FIB Visiona career fair with <b>+200 attendees</b> , 126 recruiters, and €100,000 in sponsorships raised. Sponsors included: Accenture, CaixaBank.

## PUBLICATIONS

---

- [Pub1] Marta R. Costa-jussà, Roger Creus, Oriol Domingo, Albert Domínguez, Miquel Escobar, Cayetana López, Marina Garcia, and **Margarita Geleta**. Mt-adapted datasheets for datasets: Template and repository. <https://arxiv.org/abs/2005.13156>, 2020.
- [Pub2] Maria Perera, Daniel Mas-Montserrat, Míriam Barrabés, **Margarita Geleta**, Xavier Giró-i Nieto, and Alexander G. Ioannidis. Generative moment matching networks for genotype simulation. In *2022 44th Annual International Conference of the IEEE Engineering in Medicine Biology Society (EMBC)*, pages 1379–1383, 2022.
- [Pub3] **Margarita Geleta**, Cristina Punti, Kevin McGuinness, Jordi Pons, Cristian Canton, and Xavier Giro i Nieto. Pixinwav: Residual steganography for hiding pixels in audio. In *ICASSP 2022 - 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 2485–2489, 2022.
- [Pub4] **Margarita Geleta**, Jiachen Xu, Junlin Wang Manikanta Loya, Sameer Singh, Zhou Li, and Sergio Gago-Masague. Maestro: A gamified platform for teaching ai robustness. In *The Thirteenth Symposium on Educational Advances in Artificial Intelligence (EAAI-23) in the Association for the Advancement of Artificial Intelligence Conference (AAAI)*, 2023.
- [Pub5] Jaume Ros\*, **Margarita Geleta**\*, Jordi Pons, and Xavier Giro i Nieto. Towards robust image-in-audio deep steganography. (Submitted. Awaiting decision), 2023.
- [Pub6] Qianli Feng, Viraj Shah, Raghudeep Gadde, **Margarita Geleta**, Pietro Perona, and Aleix M. Martinez. Near perfect gan inversion. (Submitted. Awaiting decision), 2023.
- [Pub7] **Margarita Geleta**, Daniel Mas Montserrat, Carlos D. Bustamante, Xavier Giró i Nieto, and Alexander G. Ioannidis. Autoencoders for genomics. (Submitted. Awaiting decision), 2023.
- [Pub8] Míriam Barrabés\*, Daniel Mas-Montserrat\*, **Margarita Geleta**, Xavier Giró i Nieto, and Alexander G. Ioannidis. Adversarial learning for feature shift detection and correction. In *Neural Information Processing Systems (NeurIPS)*, New Orleans, USA, 12/2023 In Press.

## ABSTRACTS AND POSTERS

---

- [Abs1] **Margarita Geleta**, Cristina Puntí Alvarez, Kevin McGuinness, Jordi Pons, Cristian Canton, and Xavier Giró-i Nieto. Residual steganography for hiding pixels in audio. [https://www.researchgate.net/publication/365072985\\_Residual\\_Steganography\\_for\\_Hiding\\_Pixels\\_in\\_Audio](https://www.researchgate.net/publication/365072985_Residual_Steganography_for_Hiding_Pixels_in_Audio), 2021.
- [Abs2] **Margarita Geleta**, Daniel Mas-Montserrat, Carlos Bustamante, Xavier Giró-i Nieto, and Alexander Ioannidis. Deep variational autoencoders for population genetics. [https://www.researchgate.net/publication/364357930\\_Deep\\_Variational\\_Autoencoders\\_for\\_Population\\_Genetics](https://www.researchgate.net/publication/364357930_Deep_Variational_Autoencoders_for_Population_Genetics), 2021.
- [Abs3] **Margarita Geleta**, Maria Perera, Daniel Mas-Montserrat, Míriam Barrabés, Xavier Giró-i Nieto, and Alexander Ioannidis. Poster: Generation of synthetic genotypes with neural networks. [https://www.researchgate.net/publication/365052112\\_Generation\\_of\\_Synthetic\\_Genotypes\\_with\\_Neural\\_Networks](https://www.researchgate.net/publication/365052112_Generation_of_Synthetic_Genotypes_with_Neural_Networks), 2022.
- [Abs4] **Margarita Geleta**, Jiachen Xu, Manikanta Loya, Junlin Wang, Sameer Singh, Zhou Li, and Sergio Gago-Masague. Design factors of maestro: A serious game for robust ai education. In *Proceedings of the 54th ACM Technical Symposium on Computer Science Education V. 2, SIGCSE 2023*, page 1318, New York, NY, USA, 2023. Association for Computing Machinery.
- [Abs5] Jaume Ros\*, **Margarita Geleta**\*, Jordi Pons, and Xavier Giró-i Nieto. Towards robust image-in-audio deep steganography. [https://www.researchgate.net/publication/371638577\\_Towards\\_Robust\\_Image-in-Audio\\_Deep\\_Steganography\\_Poster/related](https://www.researchgate.net/publication/371638577_Towards_Robust_Image-in-Audio_Deep_Steganography_Poster/related), 2023.

## THESES

---

- [Ths1] **Margarita Geleta**. Bachelor thesis: Unsupervised learning with applications in genomics. <https://upcommons.upc.edu/handle/2117/353817>, 2021.

## TECHNICAL SKILLS

---

**Programming** C++, C, C#, Python, R, Dart.  
**Markup** HTML5, CSS3.  
**Databases** PostgreSQL, SQLite.

**Scripting** JS, PHP, Bash.  
**Frameworks** Django, Flutter, ReactJS.

## LANGUAGES

---

**Spanish, Catalan & Russian:** native.

**English:** proficient in spoken and written English. TOEFL iBT, *November 2020*.

Appointment number: 9733 7112 0335 0471.