CURRICULUM VITAE

PERSONAL INFORMATION

Name	XAVIER, Amatriain
Address	16540 Camellia Ter
	Los Gatos, CA 95032, USA
E-Mail	xavier@amatriain.net
Nationality	American
Date of birth	06/23/1973
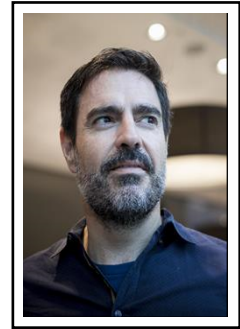
▷ Summary

I am currently the co-founder and CTO at Curai, a startup using latest AI advances to improve healthcare access for everyone. Previous to that I was the VP of Engineering at Quora, but probably my claim to fame is having started the Algorithms team at Netflix. I have extensive research and management experience of more than 20 years. I have authored more than 100 peer-reviewed publications with around 5k citations, and hold several patents. I am mostly known for my work Machine Learning and Recommendation Systems, but I have also done research on areas such as augmented reality, audio and music, signal processing, and most recently AI for healthcare. I am frequently invited to talk and lecture on the topic (see recommendation samples and list of invited talks below). As a university professor, I have lectured on topics ranging from Software Engineering to Machine Learning and Information Retrieval.

My current position at Curai is at the cross-roads of software engineering, product, machine learning, data science, and agile team management. I am also an advisor to several startups and larger companies on these topics.

Main expertise areas	machine learning and artificial intelligence, software engineering, data science, recommender systems, product design, information retrieval, social networks, user modeling, data mining, personalization, multimedia systems

JOBS

▷ Period	2017–Now
○ Employer	**Curai**

▷ 2017–Now	Co-founder
○ Position	CTO
○ Main responsibilities	I lead engineering and AI, including research. I am also directly involved in areas such as Security, Product, and general company leadership.

Some of the highlights of my time at Curai:

- Hired many new people into the team, including former employees of Facebook, Netflix, Google, Quora, Microsoft, and others.

- Defined overal technical approach to an AI-centered product that has both patients and doctors as users

- Contributed actively to all our research and research publications

- Led the definition of our culture, as well as many processes such as hiring

- Led several executive hiring processes as well as the organization of our world-class medical board

- Presented Curai externally at many events such as the AI for COVID-19 conference organized at Stanford

- Contributed actively to our different fund-raising efforts and served in the board of directors interfacing directly with our investors

▷ Period	2015–2017
○ Employer	**Quora** 650 Castro St. #450, Mountain View, CA
▷ 2015–Now	Engineering
○ Position	VP Engineering
○ Main responsibilities	I led the Engineering organization reporting directly to the CEO. I was responsible for overall technical decisions on all engineering areas. I managed an organization of around 100 engineers, including 12 managers. Some of the highlights of my time leading the team:

- Hired many new managers into the team

- Contributed directly to the design of new algorithmic approaches

- Led the re-definition of many or our innovation and engineering processes

- Represented the company external at many technical events

- Contributed to many company-wide initiatives such as the definition of our cultural values.

▷ Period	2012–2014
○ Employer	**Netflix** 100 Winchester Cr. Los Gatos, CA, USA
▷ 2011–2014	Algorithms Engineering
○ Position	Research/Engineering Director
○ Main responsibilities	I led the Algorithms Engineering team (formerly known as Personalization Science and Engineering) at Netflix. I supervised projects and was the technical lead providing technical advice to other teams and internal partners on projects related to machine learning, personalization, and search. I organized cross-team activities such as internal and external seminars, and all-hands discussions on algorithms. Some of the highlights of my time leading the team:

- I hired many new people into the team.

- The team improved several of the algorithms in Netflix recommendation, personalization, and search showing measurable gains for the business. Those improvements were cited in several quarterly investor letters.

- We defined a process to measure improvements that included a complete data pipeline, machine learned models, and offline metrics that were correlated with online AB tests results.

- We improved the general infrastructure by moving systems to the Cloud (AWS), integrating them with Spark and Hadoop.

- We improved the monitoring and real-time alerting on the algorithms running in production.

- I wrote several posts on the Netflix blogpost to explain our advances in recommendation technologies

- I was one of the 4 people selected to give a talk in the first Netflix Engineering Open House

- I gave several external talks representing Netflix in different forums such as KDD, Recsys, Google, Facebook, or Twitter

- I started a popular internal Research Seminar series to discuss advanced topics related to Machine Learning and Personalization

▷ Period	2007–2011
○ Employer	**Telefonica Research** 177, Via Augusta, Barcelona, 08021, Spain
▷ 2007 until 2011	Recommender Systems, and User Modeling
○ Position	Research Scientist
○ Main responsibilities	Telefonica is one of the largest Telecommunications Company in the World. As a Research Scientist in Telefonica Research I led the area of Web Science with a specific focus on Social Networks and Recommender Systems. During this time I led postdoc researchers and interns from around the world. My main goal as a researcher was to obtain top-tier publications in the field (see Publication list below) and generate internal IP in the form of patents and tech transfer. I also acted as a high-profile consultant to development teams dealing with projects in those same areas.
▷ Period	2005–2007
○ Employer	**University of California Santa Barbara**
▷ 2005 until 2007	Center for Research in Electronic Arts and Technology
○ Position	Research Director
○ Main responsibilities	Direct responsibility over research coordination, planning and facility management for this research center that includes 3 different labs/studios and around 20 different researchers http://www.create.ucsb.edu. During this period I was also Associate Director for the Media Arts and Technology Initiatives and I led the Allosphere Project. Under direct supervision of the Director, responsible for industry relation, grant writing, facility coordination and PR for a $40 million multimedia research center to be hosted in the California Nanosystems Institute. Direct supervision of technical issues related to one of the largest immersive environments in the world, an spherical building called the Allosphere http://www.allosphere.ucsb.edu.
▷ Period	1999–2005
○ Employer	**Universitat Pompeu Fabra**
▷ 1999 until 2005	Music Technology Group
○ Position	Researcher/Project Manager
○ Main responsibilities	I was responsible for teams of up to 8 researchers in company and publicly funded research projects. Project manager and lead designer of the CLAM framework http://clam-project.org.

Advising/Consulting

▷ Period	2017–
○ Employer	**SCRM/LIDL**
▷ 2017–	Science and Engineering
○ Position	Advisor
○ Main responsibilities	I have been advising the CEO of SCRM, as well as the whole team, and the larger LIDL organization, on aspects related to AI/ML, Data Engineering, and also general management. For context, LIDL is the largest retailer in Europe, and one of the largest in the world, and SCRM is the center that leads all the loyalty, multichannel experience, with a big focus on personalization and user understanding.
▷ Period	2017–
○ Employer	**Vivino**
▷ 2017–	Machine Learning
○ Position	Advisor
○ Main responsibilities	I have been advising Vivino in the areas of personalization and recommendations.
▷ Period	2019–
○ Employer	**Lang.AI**
▷ 2019–	Machine Learning
○ Position	Advisor
○ Main responsibilities	Advise the CEO on general approaches to language understanding as well as startup leadership
▷ Period	2019-2020
○ Employer	**Manning Publications**
▷ 2019-2220	AI/Machine Learning
○ Position	Series Editor
○ Main responsibilities	I led the definition of a new online virtual course series focused on AI and Machine Learning, with a big practical component.
▷ Period	2019-2020
○ Employer	**Alchemist Accelerator**
▷ 2019-2220	Startups
○ Position	Coach
○ Main responsibilities	I advised several AI-centric startups on their approach and strategy.

Teaching

▷ Period   2010-2011

○ Employer   **EADA Business School, Barcelona (SPAIN)**

▷ 2010-2011   Information Systems

○ Position   Associate Professor

○ Main responsibilities   Associate professor teaching Information Systems and Technology to prospective managers and business leaders enrolled in full or part-time MBA's in one of the world's top 100 Business Schools. The courses consisted in solving practical cases in which students had to take business decisions with a strong technological component and background.

▷ Period   2007-2010

○ Employer   **Universitat Pompeu Fabra**, Barcelona (SPAIN)

▷ 2007 until 2010   Software Engineering and Information Retrieval

○ Position   Associate Professor

○ Main responsibilities   Associate professor and main coordinator of the undergraduate courses on Software Engineering and Information Retrieval. During this time I also directed several student Undergrad, Master and PhD Thesis .

▷ Period   2007–

○ Employer   **Telefonica Research**, Barcelona (SPAIN)

▷ 2007 until Now   Data Mining, Information Retrieval, Recommender Systems

○ Position   Internal Lecturer

○ Main responsibilities   Created and taught several internal courses such as Recommender Systems, Information Retrieval and Data Mining.

▷ Period   2005–2007

○ Employer   **University of California Santa Barbara (UCSB)**

▷ 2005 until 2007   Multimedia, Computer Music, and Programming

○ Position   Lecturer

○ Main responsibilities   Lecturer in the MAT Master Program and Music Department. Courses: Multimedia Engineering, Introduction to Programming...

▷ Period   1999–2005

○ Employer   **Universitat Pompeu Fabra**, Barcelona (SPAIN)

▷ 1999 until 2005   Software Engineering, Music and Audio Engineering, Programming & Data Structures, Database Programming

○ Position   Assistant Professor

○ Main responsibilities   Professor at the Computer Science Studies. During this time I directed around 15 student Thesis.

EDUCATION

▷ Period
○ Acquired qualifications
○ Institute
○ Principal subjects
○ Results

1999–2005
PhD on Computer Science and Digital Communications
Universitat Pompeu Fabra (UPF), Barcelona (SPAIN)
Software Engineering, Audio Signal Processing
Under the supervision of Dr. Xavier Serra I read my dissertation entitled "An Object-Oriented Metamodel for Digital Signal Processing with a focus on Audio and Music" in January 2005, receiving the highest degree (Cum Laude).

▷ Period
○ Acquired qualifications

○ University

1992–1999
Telecommunications Engineering (roughly equivalent to ECE, including Master Degree)
Universitat Politecnica de Catalunya (UPC), Barcelona (SPAIN)

▷ Period
○ Acquired qualifications

2005–
I am a fan of online courses, and have followed many of them, particularly on AI and ML, but also on management, and leadership.

Selected Publications

I have authored more than 50 publications. Here are some relevant ones:

▷ McCreery, C. Katariya, N. Kannan, A. Chablani, M. Amatriain, X. [2020]

Effective Transfer Learning for Identifying Similar Questions: Matching User Questions to COVID-19 FAQs. Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining. 2020

▷ Prabhu, V. Kannan, A. Ravuri, M. Chavani, M. Sontag, D. Amatriain, X. [2019]

Few-shot learning for dermatological disease diagnosis. Proceedings of the Machine Learning for Healthcare Conference. 2019

▷ Ravuri, M. Kannan, A. Tso, G. Amatriain, X. [2018]

Learning from the experts: From expert systems to machine-learned diagnosis models. Proceedings of the Machine Learning for Healthcare Conference. 2018

▷ Amatriain, X. Agarwal, D. [2016]

Lessons learned from building real-life recommender systems. Proceedings of the 10th ACM Conference on Recommender Systems. 2016

▷ Amatriain, X., Basilico, J. [2016]

Past, present, and future of recommender systems: An industry perspective. In Proceedings of the 10th ACM conference on Recommender Systems. 2016

▷ Amatriain, X., Basilico, J. [2015]

Recommender systems in industry: A netflix case study. In Recommender systems handbook 2015

▷ Amatriain, X. [2013]

Beyond data: from user information to business value through personalized recommendations and consumer science. In Proceedings of the 22nd ACM international conference on Conference on information & knowledge management. CIKM. 2013

▷ Amatriain, X. [2013]

Mining large streams of user data for personalized recommendations. ACM SIGKDD Explorations Newsletter. 14[2]. 2013

▷ Amatriain, X. Pujol, J.M. Jaimes, A. Oliver, N. [2011]

Data Mining Methods for Recommender Systems. In Handbook of Recommender Systems. P. Kantor, F. Ricci, L. Rokach, B. Shapira (ed.). Springer. 2011

▷ D. Parra, X. Amatriain [2011].

Walk the Talk. Analyzing the relation between implicit and explicit feedback for preference elicitation. in the 2011 UMAP Conference. Girona. Spain.

▷ Amatriain, X., Arumi, P. [2011]

Frameworks generate domain-specific languages: a case study in the multimedia domain. IEEE Transactions on Software Engineering. 31 [4]. 2013

▷ A. Karatzoglou, X. Amatriain, L. Baltrunas, N. Oliver [2010]

Multiverse Recommendation: N-dimensional Tensor Factorization for Context-aware Collaborative Filtering. in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ J. Bachs, X. Amatriain [2010]

Geolocated Movie Recommendations based on Expert Collaborative Filtering. in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ T. Cebrian, M. Planaguma, P. Villegas, X. Amatriain [2010]

Music recommendations with temporal context awareness. in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ R. Garcia, X. Amatriain [2010]

Hybrid Methods for Recommending Connections in Online Social Networks. in the Workshop on Recommender Systems and the Social Web in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ N. Lathia, S. Hailes, L. Capra, and X. Amatriain [2010]

Temporal Diversity in Recommender Systems. in the 2010 ACM SIGIR Conference. Geneva, Switzerland

▷ J. Ahn, X. Amatriain [2010]

Towards Fully Distributed and Privacy-preserving Recommendations via Expert Collaborative Filtering and RESTful Linked Data. in ACM/IEE Conference on Web Intelligence. Toronto, Canada.

▷ N. Tintarev, A. Flores, X. Amatriain [2010]

Off the beaten track - a mobile field study exploring the long tail of mobile tourist recommendations. in the 2010 Mobile HCI Conference. Porto, Portugal

▷ Amatriain, X. Lathia, N., Kwak, H. Oliver, N. [2009]

The Wisdom of the Few. A Collaborative Filtering Approach Based on Expert Opinions from the Web. SIGIR'09

▷ Amatriain, X. Pujol, J.M., Oliver, N. [2009]

I like it... I like it not: Measuring User Ratings Noise in Recommender Systems. UMAP 09 (User Modeling, Adaptation, and Personalization.

▷ Lathia, N. Amatriain, X. Pujol, J.M. [2009]

Collaborative Filtering With Adaptive Information Sources. The 7th Workshop on Intelligent Techniques for Web Personalization & Recommender Systems at IJCAI-09

▷ Amatriain, X. Pujol, J.M. Tintarev, N. Oliver, N. [2009]

Rate it Again: Increasing Recommendation Accuracy by User re-Rating. 2009 ACM RecSys Conference.

▷ Amatriain, X. Baltrunas, L. [2009]

Towards Time-Dependant Recommendation based on Implicit Feedback. Context-aware Recommender Systems Workshop in 2009 ACM RecSys Conference.

▷ Amatriain X., Kuchera-Morin J. , Hollerer T. , Pope S.T. [2009]

The Allosphere: An Immersive Multimedia Instrument for Scientific Data Discovery and Artistic Exploration in IEEE Multimedia, 16 (2). April, 2009

▷ M. Cha, P. Rodriguez, J. Crowfort, S. Moon, X. Amatriain [2008]

Watching TV over an IP Network in 8th ACM SIGCOMM conference on Internet measurement

INVITED TALKS AND OTHER PROFESSIONAL ACTIVITIES

▷ Period

2013–

○ Activity

Invited talk at MLConf 2020 San Francisco:AI For COVID-19: An Online Virtual Care Approach
-
Guest lecture at the Fullstack Deep Learning Bootcamp: Lessons learned from building practical deep learning systems
-
AI and COVID-19 virtual conference at Stanford: AI for COVID-19: An online virtual care approach.
-
Invited talk at MLConf 2019 San Francisco: AI for Healthcare: Scaling access and quality of care for everyone
-
Web of Health session at TheWebConf in SF: Towards online universal quality healthcare through AI
-
Keynote the Chatbot Workshop at ICWSM 2018: Learning to speak medicine
-
Recommender Systems In Industry 4 hour class in the 2017 Recsys Summer School in Bolzano, Italy
-
Recsys 2016 tutorial: Lessons learned from building real-life recommender systems.
-
Staying Shallow & Lean in a Deep Learning World. Presentation at the 2016 Data Science Summit.
-
Strata 2016 - Lessons Learned from building real-life Machine Learning Systems.
-
Invited talk at Airbnb's Open Air conference: Machine Learning to grow the World's knowledge
-
Invited talk IEEE Devops Unleashed Seminar: Lessons learned from Innovation-driven companies
-
Invited talk at 2014 Mining Massive Data Sets workshop at UC Berkeley: Distributing ML Algorithms, from GPUs to the Cloud
-
Tutorial in the 2014 SIG KDD Conference: The Recommender System Revisited.
-
Invited talk at 2013 QCon SF: ML at Netflix Scale
-
Invited talks at Facebook, LinkedIn, Uber, StitchFix...

▷ Period	2010-2011
○ Activity	Tutorial in the 2012 ACM Recommender Systems Conference: Building large-scale real-world recommender systems.
	-
	Invited talk at the ACM SIG on Data Mining meeting: Netflix Recommendations, beyond the 5 stars. 2012
	-
	Invited talks at Twitter, Google, and Technicolor. 2012
	-
	Invited talk at Strata. 2012
	-
	Invited talk at the 2012 Machine Learning Summer School in UC Santa Cruz
	-
	Invited talk at From Data to Knowledge: Machine-Learning with Real-time and Streaming Applications at UC Berkeley
	-
	Invited talk in the Workshop on Big Learning in San Francisco
	-
	Invited Talks at LinkedIn, Netflix, and UCSB.
	-
	Keynote at the International Workshop on Context Aware Recommendation Systems in Chicago - Invited Talk at Free University of Bolzano to celebrate its 10th anniversary "The Beauty of Computing... with People"
	-
	General Conference Chair for 4th ACM Conference on Recommender Systems (Barcelona, Spain) - Invited Talk at Boston University "It's all about the Data. Data-driven approaches to the Recommender Problem"

RECOMMENDATIONS AND EXTERNAL REFERENCES

○ Many more upon request. But, here are some examples of what people have to say about my work:

As "Mining the Big Data" was the grand theme of this yearâs successful KDD conference, we are preparing a SIGKDD Explorations issue about it. We would like to cordially invite you to contribute with a paper about "Applications of Big Data: Recommender Systems", **as in our opinion you're the most influential scientist expert on that topic and your recent tutorial in RecSys'12 has generated much interest from the KDD community**.
Wei Fan (IBM Research) and Albert Bifet (University of Waikato)
-

During his time in Telefonica he has focused in the area of Recommender Systems, a topic that falls under my areas of expertise and is one of the areas of interest of the laboratories that I lead. **Dr. Amatriain is currently a widely recognized figure in this field**, *where he has contributed with several important and fundamental advances. His leading position in the field was acknowledged with his co-chairing of the 2010 ACM International Recommender Systems Conference. In conclusion, Dr. Amatriain has had important contributions in different areas of Computer Science research, from Multimedia to Information Retrieval and he is well known by these communities.*
Ricardo Baeza-Yates (VP of Research Yahoo!)
-

Dr. Amatriain's work in Recommender Systems and in Multimedia Systems is widely acknowledged as groundbreaking and of tremendous importance to the development of our understanding of how to design more effective recommender systems and cross-platform audio applications.
Prof. Joseph Konstan (U. of Minnesota)
-

Xavier Amatriain has all the makings of a great scientist (...) He is brilliant and accomplished in his field and internationally renowed for his research.
Prof. Roger Dannenberg (CMU)
-

Dr. Xavier Amatriain is highly regarded in the field of computer science for his contributions in Recommender Systems and neighboring areas.
Prof. Paul Resnick (U. of Michigan)

ABILITIES

COMPUTER SKILLS

- Programming Languages: C++, Java, C, Python, Scala, Ruby

- Machine Learning: ANN, Deep Learning (RNNs, CNNs...), Language Models, Embeddings, Matrix Factorization, Linear/Logistic Regression, SVM, GBDT, Random Forest, Knn, K-means, Affinity Propagation...

- Experimentation environments: Tensor Flow, Pytorch, GNU-R, Matlab/Octave, Weka

- Big Data: Spark, Hadoop (Hive, Pig, Mahout), Cassandra

- Cloud: AWS, GCP, Azure

LINKS

- Twitter: http://www.twitter.com/xamat

- Webpage: http://xavier.amatriain.net

- Blog: https://xamat.medium.com/

- LinkedIn: http://www.linkedin.com/in/xamatriain

- Slideshare: http://www.slideshare.net/xamat

Los Gatos, CA, May 2021
Xavier Amatriain