

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name  
Address

XAVIER, Amatriain  
650 Castro St. #450  
Mountain View, CA 94041, USA

E-Mail  
Nationality  
Date of birth

[xavier@amatriain.net](mailto:xavier@amatriain.net)  
Spanish  
06/23/1973



### ▸ Summary

I am the VP of Engineering at Quora. I have extensive research and management experience of more than 10 years. I have authored more than 50 publications and hold several patents. I am considered a world expert on Machine Learning and Recommendation Systems. 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.

In my current position at Quora, I lead a team of engineers in charge of growing and sharing the world's knowledge. My current position is in the cross-roads of software engineering, machine learning, data science, and agile team management.

### Main interest areas

machine learning, data science, information retrieval, recommender systems, social networks, user modeling, data mining, personalization, multimedia systems

## JOBS

▷ Period

○ Employer

2015–Now

**Quora**

650 Castro St. #450, Mountain View, CA

▷ 2015–Now

○ Position

○ Main responsibilities

Engineering

VP Engineering

I lead the Engineering organization at Quora reporting directly to the CEO. I am responsible for overall technical decisions on all engineering areas. I manage an organization of around 70 engineers, including 9 managers.

- ▷ Period
- Employer

2012–2014

**Netflix**

100 Winchester Cr. Los Gatos, CA, USA

- ▷ 2012–2014
- Position
- Main responsibilities

Algorithms Engineering

Research/Engineering Director

I led the Algorithms Engineering team (formerly known as Personalization Science and Engineering) at Netflix. I supervise projects and I am a technical lead and provide technical advice to other teams and internal partners on projects related to machine learning and personalization. I organize 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, including PhDs from USC, CMU, MIT, and former employees of Google, Microsoft, and Yahoo Labs.
- The team improved several of the algorithms in Netflix personalization, 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 an internal Research Seminar series to discuss advanced topics related to Machine Learning and Personalization

<ul style="list-style-type: none"> <li>▷ Period</li> <li>○ Employer</li> </ul>	<p>2011–2012</p> <p><b>Netflix</b> 100 Winchester Cr. Los Gatos, CA, USA</p>
<ul style="list-style-type: none"> <li>▷ 2011 until Now</li> <li>○ Position</li> <li>○ Main responsibilities</li> </ul>	<p>Personalization Science and Engineering Research/Engineering Manager I managed a team of researchers and engineers in charge of developing Netflix personalization algorithms and infrastructure. I supervised projects that in the crossroads of data science, software engineering, and advanced machine learning research.</p>
<ul style="list-style-type: none"> <li>▷ Period</li> <li>○ Employer</li> </ul>	<p>2007–2011</p> <p><b>Telefonica Research</b> 177, Via Augusta, Barcelona, 08021, Spain</p>
<ul style="list-style-type: none"> <li>▷ 2007 until 2011</li> <li>○ Position</li> <li>○ Main responsibilities</li> </ul>	<p>Recommender Systems, and User Modeling Research Scientist 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.</p>
<ul style="list-style-type: none"> <li>▷ Period</li> <li>○ Employer</li> </ul>	<p>2006–2007</p> <p><b>University of California Santa Barbara</b></p>
<ul style="list-style-type: none"> <li>▷ 2006 until 2007</li> <li>○ Position</li> <li>○ Main responsibilities</li> </ul>	<p>The Allosphere Project Associate Director for the Media Arts and Technology Initiatives 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 <a href="http://www.allosphere.ucsb.edu">http://www.allosphere.ucsb.edu</a>.</p>
<ul style="list-style-type: none"> <li>▷ Period</li> <li>○ Employer</li> </ul>	<p>2005–2007</p> <p><b>University of California Santa Barbara</b></p>
<ul style="list-style-type: none"> <li>▷ 2005 until 2007</li> <li>○ Position</li> </ul>	<p>Center for Research in Electronic Arts and Technology Research Director</p>

<ul style="list-style-type: none"> <li>○ Main responsibilities</li> </ul>	<p>Direct responsibility over research coordination, planning and facility management for this research center that includes 3 different labs/studios and around 20 different researchers <a href="http://www.create.ucsb.edu">http://www.create.ucsb.edu</a>.</p>
<ul style="list-style-type: none"> <li>▷ Period</li> </ul>	<p>1999–2005</p>
<ul style="list-style-type: none"> <li>○ Employer</li> </ul>	<p><b>Universitat Pompeu Fabra</b></p>
<ul style="list-style-type: none"> <li>▷ 1999 until 2005</li> </ul>	<p>Music Technology Group</p>
<ul style="list-style-type: none"> <li>○ Position</li> </ul>	<p>Researcher/Project Manager</p>
<ul style="list-style-type: none"> <li>○ Main responsibilities</li> </ul>	<p>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 <a href="http://clam-project.org">http://clam-project.org</a>.</p>

# Teaching

- ▷ Period
    - Employer
  
  - ▷ 2010-2011
    - Position
    - Main responsibilities
  
  
  
  
  
  
  
  
  
  
  
  
  
  - ▷ Period
    - Employer
  
  - ▷ 2007 until 2010
    - Position
    - Main responsibilities
  
  
  
  
  
  
  
  
  
  
  
  
  
  - ▷ Period
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  - ▷ 2007 until Now
    - Position
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  - ▷ Period
    - Employer
  
  - ▷ 2005 until 2007
    - Position
    - Main responsibilities
  
  
  
  
  
  
  
  
  
  
  
  
  
  - ▷ Period
    - Employer
  
  - ▷ 1999 until 2005
    - Position
    - Main responsibilities
- 2010–  
**EADA Business School, Barcelona (SPAIN)**
- Information Systems  
Associate Professor  
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.
- 2007-2010  
**Universitat Pompeu Fabra, Barcelona (SPAIN)**
- Software Engineering and Information Retrieval  
Associate Professor  
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 .
- 2007–  
**Telefonica Research, Barcelona (SPAIN)**
- Data Mining, Information Retrieval, Recommender Systems  
Internal Lecturer  
Created and taught several internal courses such as Recommender Systems, Information Retrieval and Data Mining.
- 2005–2007  
**University of California Santa Barbara (UCSB)**
- Multimedia, Computer Music, and Programming  
Lecturer  
Lecturer in the MAT Master Program and Music Department. Courses: Multimedia Engineering, Introduction to Programming...
- 1999–2005  
**Universitat Pompeu Fabra, Barcelona (SPAIN)**
- Software Engineering, Music and Audio Engineering, Programming & Data Structures, Database Programming  
Assistant Professor  
Professor at the Computer Science Studies. During this time I directed around 15 student Thesis.

## EDUCATION

- |                           |   |
|---------------------------|---|
| ▷ Period                  | 1999–2005   |
| ○ Acquired qualifications | <b>PhD on Computer Science and Digital Communications</b>   |
| ○ Institute               | Universitat Pompeu Fabra (UPF), Barcelona (SPAIN)   |
| ○ Principal subjects      | Software Engineering, Audio Signal Processing   |
| ○ Results                 | 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                  | 1992–1999   |
| ○ Acquired qualifications | Telecommunications Engineering (roughly equivalent to ECE, including Master Degree)   |
| ○ University              | Universitat Politecnica de Catalunya (UPC), Barcelona (SPAIN)   |
| ▷ Period                  | 2005–   |
| ○ Acquired qualifications | Others. I have received several courses related to management, and leadership. I have also followed several online courses such as the Artificial Intelligence and Machine Learning from Stanford                                 |

## Selected Publications

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

- ▷ 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
- ▷ Xavier Amatriain, Karen Church and Josep M. Pujol[2010] *Being Social: Research in Context-aware and Personalized Information Access @ Telefonica.* 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/IEEE 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
- ▷ Amatriain, X. [2007] *A Domain-Specific Metamodel for Multimedia Processing Systems* in IEEE Transactions on Multimedia. Volume 9 Issue 6. October 2007

## INVITED TALKS AND OTHER PROFESSIONAL ACTIVITIES

- ▷ Period
- Activity

2013-2015

Invited talk at MLConf 2014 San Francisco: 10 Lessons Learned from building Machine Learning Systems

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Invited talk at MLConf 2015 Seattle: Machine Learning at Quora

-

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

-

Invited talk at 2013 QCon SF: ML at Netflix Scale

-

Tutorial in the 2014 ACM Recommender Systems Conference: The Recommender System Revisited.

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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
- Activity

2012

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 at The Westin San Francisco

- ▷ Period
  - Activity
- 2011
- Invited Talks at LinkedIn, Netflix, and UCSB.
- 
- Keynote at the International Workshop on Context Aware Recommendation Systems in Chicago
- ▷ Period
  - Activity
- 2010
- 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)
- ▷ Period
  - Activity
- 2009
- Invited Talk at Boston University “It’s all about the Data. Data-driven approaches to the Recommender Problem”
- ▷ Period
  - Activity
- 2008-2010
- Senior Program Committee member for the ACM Recommender Systems Conference (Recsys)
- 
- Program Committee member for the ACM SIGIR Conference

## RECOMMENDATIONS AND EXTERNAL REFERENCES

o 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 year’s 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!)

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*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 renowned 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: SVM, ANN, Logistic Regression, GBDT, Random Forest, Knn, K-means, Affinity Propagation...
- Experimentation environments: GNU-R, Matlab/Octave, Weka
- Big Data: Hadoop (Hive, Pig, Mahout), Cassandra
- Cloud: Amazon Web Services

### LINKS

- Twitter: <http://www.twitter.com/xamat>
- Webpage: <http://xavier.amatriain.net>
- Blog: <http://technocalifornia.blogspot.com>
- LinkedIn: <http://www.linkedin.com/in/xamatriain>
- Slideshare: <http://www.slideshare.net/xamat>

San Jose, CA, October 2012  
Xavier Amatriain