

Experiences

- 2012 **Product Manager**, *Facebook Inc.*, Menlo Park, USA
Building great products for millions of people and making the world more open and connected.
- 2010–2012 **Cofounder and CEO**, *Glancee Inc.*, San Francisco, USA
Glancee is a location-based mobile app that helps you discover the hidden connections you share with the people around you. Glancee highlights people that have friends in common, that went to the same school you attended, that work in your same company, or that share interests similar to yours. **Glancee was acquired by Facebook in May 2012.**
- Summer 2010 **Software Engineer**, *Google Inc.*, New York, USA
The internship in the geo and maps team focused on refactoring and updating internal tools that are used to analyze and visualize Google's geographical data sets and to identify clustering and consistency problems in the data before it is made accessible in Google Maps.
- Spring 2010 **Temporary Professor**, *New Academy of Fine Arts*, Milan, Italy
Held a lecture series on Information Design, covering the theoretical aspects of the workflow (from raw data to visual analytics) and the practical aspects of analyzing and presenting information with R and Processing. As a final project the class developed a visual analysis of tourism patterns in Milan, Italy based on public geotagged Flickr pictures.
- Summer 2009 **Research Scientist**, *Santa Fe Institute*, Santa Fe, USA
Developed visual analytics for very large spatial dynamic networks, like cell phone networks and transportation networks. The system was used to study the urbanization processes and the diffusion of diseases in rural areas of Africa. It is also used to support the ongoing research on the assessment of consumer sentiment.
- 2007–2009 **Research Scientist**, *Massachusetts Institute of Technology*, Cambridge, USA
Developed an information system for the study of mobility, tourism, and social dynamics in the urban environment. The system was used to study the distribution and evolution of social activities in Italy, Spain, New York City, and Washington, D.C. during events like the NYC Waterfalls and the Presidential Inauguration.

Education

- All but dissertation **Ph.D. Computer Science**, *GPA: 4.0/4*, University of Illinois at Chicago, USA
Thesis: Inferring the Consumer Confidence in the Economy from Multimodal Social Content and Behavioral Data. Supervised by Prof. Bing Liu, the thesis will present data mining techniques to automatically infer the consumer sentiment on the state of the economy from a very large human behavioral data set, which includes spending behaviour, mobility and communication patterns, and unbiased opinions from online comments and reviews. The work aims to offer an alternative to surveys as a measure of consumer sentiment and to contribute to the literature new algorithms for the spatiotemporal reconciliation and analysis of heterogeneous, co-varying data.
- 2009 **M.Sc. Computer Science**, *GPA: 3.9/4*, University of Illinois at Chicago, USA
Thesis: Exploratory Data Analysis of Digital Communications in Global Cities. Supervised by Prof. Jason Leigh, the thesis contributes to the study of global cities, their evolution, and their impact on global affairs. The thesis studies cities as organizational hubs of information flows through the visualization of data gathered by pervasive systems like telecommunication networks. It also presents a methodology to analyse the data to study the presence and movements of crowds in the city, like during the NYC Waterfalls public exhibition of Summer 2008.
- 2008 **M.Sc. Computer Engineering**, *Summa Cum Laude*, Politecnico di Milano, Italy
Thesis: Persistence, Security, and Web-based Management for WikiCity, an Urban Information System. Supervised by Prof. Carlo Ghezzi, the thesis provides a thorough overview of the field of urban informatics, which studies the interaction of people, places, and technologies, and presents WikiCity, an information system for the real-time mapping of city dynamics, discussing the system architecture and the implementation of a data persistence layer, a security model for authentication and authorization, and a web application for administration.
- 2005 **B.Sc. Computer Engineering**, *Summa Cum Laude*, Politecnico di Milano, Italy
Thesis: Analysis of Predictive Models for the Financial Markets. Supervised by Prof. Sergio Bittanti, the thesis proposes a comparative analysis of the performances of different autoregressive and moving average models (ARX and ARMAX) in predicting the percentage return of the S&P 500 index on a daily basis. The work also takes into consideration other techniques, in particular neural networks and fuzzy control systems.
- 2008 **Alta Scuola Politecnica**
Alta Scuola Politecnica is a joint institution of Politecnico di Milano and Politecnico di Torino. The school runs in parallel to the graduate programmes and offers advanced studies in innovation and leadership paired with multidisciplinary projects in collaboration with Italian companies and public institutions.
- 2008 **Collegio di Milano**
Collegio di Milano is an Italian college of excellence where the best students from the seven universities in Milan work on multidisciplinary projects and follow a program of extra curricular activities which include ex-cathedra courses, discussion forums, and music and photography laboratories.

Projects and Collaborations

- opinion mining **Study of User-Generated Evaluative Texts**
The project aims at developing a ranking algorithm for user-generated evaluative texts like blog comments and product reviews based on the properties of authority, authenticity, honesty, and helpfulness. Based on our studies, these are very different in nature and could be used to uniquely and completely rank the relevancy of such content.
- information visualization **Obama | One People**
Obama | One people is an unprecedented analysis of Barack Obama's Inauguration Day on January 20, 2009. The project features two visualizations of mobile phones call activity that characterize the inaugural crowd and answer the questions: Who was in Washington, D.C. for President Obama's Inauguration Day? When did they arrive, where did they go, and how long did they stay?
- tourism analysis **The World's Eyes**
The World's Eyes illustrates the photos that people visiting Spain leave behind them as evidences of contemporary tourism in the country, uncovering the evolutions of the presence and flows of tourists. The analysis and mapping of this data allows to understand the attractiveness of leisure cities and their points of interest.
- urban studies **NYC Waterfalls**
In occasion of the NYC Waterfalls, a \$20 million public exhibition in New York aimed at attracting people towards the waterfront of the city, we demonstrate how digital footprints has significant promise for conducting tourism studies and the optimization of tourism strategies, plans and marketing tools. Our results contribute new insights to quantify the distribution of visitors and assess the attractiveness of areas of interest in proximity of the event.
- architecture **Digital Water Pavillion**
Supervised by Prof. Carlo Ratti (MIT) and Prof. William Mitchell (MIT), the DWP is an interactive structure made of digitally controlled water curtains located at the entrance to Expo Zaragoza 2008. The project is the first example of reconfigurable architecture that allows spaces to expand or shrink based on necessity and use. The DWP was selected as Time magazine's best invention of 2007.
- information visualization **New York Talk Exchange**
NYTE illustrates the global exchange of information in real-time by visualizing volumes of long distance telephone and Internet data flowing between New York and cities around the world. The project was developed in partnership with AT&T and was exhibited for four months at the Museum of Modern Art in New York for the Design and Elastic Mind exhibition.
- urban studies **WikiCity**
WikiCity started by developing a dynamic model of a city interpreted as a real-time control system which can be optimized by enacting a feedback loop between people and places through technology. The project then evolved into a complete urban information system for the real-time mapping of city dynamics which becomes a decision support system for the citizens, the businesses, and the authorities.

Publications

- September 2010 **Pulse of the city: Visualizing Urban Dynamics of Special Events**, Vaccari, A., Martino, M., Rojas, F., Ratti, C., 20th International Conference on Computer Graphics and Vision (GraphiCon)
- November 2009 **Towards the SocioScope: an Information System for the Study of Social Dynamics through Digital Traces**, Vaccari, A., Calabrese, F., Liu, B., Ratti, C., 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
- October 2009 **A holistic framework for the study of urban traces and the profiling of urban processes and dynamics**, Vaccari, A., Liang, L., Biderman, A., Ratti, C., Pereira, F., Oliveirinha, J., Gerber, A., 12th International IEEE Conference on Intelligent Transportation Systems
- September 2009 **MIT Enernet: Correlating WiFi Activity to Human Occupancy**, Vaccari, A., Samouhos, S., Glicksman, L., Ratti, C., Healthy Buildings 2009 - 9th International Conference and Exhibition
- August 2009 **Estimating the Presence of People from Aggregate Cell Phone Network Activity**, Scognamiglio, F., Vaccari, A., 6th International Symposium on Digital Earth
- August 2009 **Quantifying urban attractiveness from the distribution and density of digital footprints**, Girardin, F., Vaccari, A., Gerber, A., Biderman, A., Ratti, C., International Journal of Spatial Data Infrastructures
- June 2009 **Towards estimating the presence of visitors from the aggregate mobile phone network activity they generate**, Girardin, F., Vaccari, A., Gerber, A., Biderman, A., Ratti, C., 11th International Conference on Computers in Urban Planning and Urban Management
- August 2008 **Perceptual data hiding exploiting between-coefficient contrast masking**, Marano, S., Battisti, F., Vaccari, A., Boato, G., Carli, M., 2008 Conference of the the International Society for Optical Engineering (SPIE)