Vanessa I. Cedeno-Mieles – CV

Address	Guayaquil, Ecuador	**Web page**	https://vcedeno.github.io/
Date of Birth	13th December 1983	**Email**	vanessaicm@gmail.com vcedeno@espol.edu.ec
Nationality	Ecuadorian		

Research Interest

My research interest includes machine learning, data mining, simulations and networked online social science experiments. There has been significant interest in online social science experiments in order to understand behavior at-scale, with finer-grained data collection. My work uncovers interesting insights about social behaviors through data analysis, simulation and modeling.

Education

2014-2019   Ph.D. in Computer Science - Virginia Tech, USA

Relevant Coursework:
-Inf. Visualization   -User Interface Software
-Inf. Storage and Retrieval -Randomized Algorithms
Cumulative average: 3.78/4

2008-2010   Master of Science in Computer Science - Florida State University, USA

Relevant Coursework:
-Database Systems   -Advanced Topics in Data Management - Advanced Algorithms
-Computer Architecture   -Data and Computer Communications
-Distributed Systems   -Computer and Network Administration
Cumulative average: 3.08/4

2002-2007   B. SC. In Computer Science - Escuela Superior Politecnica del Litoral, Ecuador

Relevant Coursework:
-Discrete Mathematics   -Programming Fundamentals
-Algorithms Analysis   -Programming Languages
-Database Systems   -Distributed Systems
-Software Engineering   -Operative Systems
Cumulative average: 3.4/4
Class Rank: 1/11 (Top 9.09%)

Technical Skills

- **Used actively**

  Python, C, C++, Java, Apache, Pandas, R, CSS, Git, HTML, JQuery, JavaScript, Bootstrap, Linux, MySQL, Oracle, OSX, Ruby, Ruby on Rails, Amazon EC2, SQL, SQLite, XML, ASP, PHP, R, Hadoop, D3.js

- **Used when needed**

  JXTA, AJAX, Oracle Forms, Oracle reports, PostgreSQL, Sybase, Windows

- **Used, but mostly forgotten**

  Pascal, ML, FreeBSD, Squeak, Photoshop

Publications

- Vanessa Cedeno-Mieles, Javier Tibau, Chris J. Kuhlman, Deborah Tatar, Steve Harrison. "Data Analysis on a Domestic Media Space Connecting Internationally Distributed Families". The International Conference on Information and Communication Technologies and Development (ICTD) 2020. June 17-20, Guayaquil, Ecuador.

- Vanessa Cedeno-Mieles, Zhihao Hu, Yihui Ren, Xinwei Deng, Abhijin Adiga, Christopher Barrett, Noshir Contractor, Saliya Ekanayake, Joshua M. Epstein, Brian J. Goode, Gizem Korkmaz, Chris J. Kuhlman, Dustin Machi, Michael W. Macy, Madhav V. Marathe, Naren Ramakrishnan, S. S. Ravi, Parang Saraf, Nathan Self. "Networked experiments and modeling for producing collective identity in a group of human subjects using an iterative abduction framework". Social Network Analysis and Mining, SNAM (Journal). Volume 10. Article 11. Published online: 07 January 2020.

- Zhihao Hu, Xinwei Deng, Brian J. Goode, Naren Ramakrishnan, Parang Saraf, Nathan Self, Abhijin Adiga, Gizem Korkmaz, Chris J. Kuhlman, Dustin Machi, Madhav V. Marathe, S. S. Ravi, Yihui Ren, Vanessa Cedeno-Mieles, Saliya Ekanayake. "On the Modeling and Agent-Based Simulation of a Cooperative Group Anagram Game". The Winter Simulation Conference (WSC) 2019. December 8-11, National Harbor, MD, USA, pp. 169-180.

- Vanessa Cedeno-Mieles, Zhihao Hu, Yihui Ren, Xinwei Deng, Abhijin Adiga, Christopher Barrett, Saliya Ekanayake, Gizem Korkmaz, Chris J. Kuhlman, Dustin Machi, Madhav V. Marathe, S. S. Ravi, Brian J. Goode, Naren Ramakrishnan, Parang Saraf, Nathan Self, Noshir Contractor, Joshua M. Epstein, and Michael W. Macy. "Mechanistic and Data-Driven Agent-Based Models to Explain Human Behavior in Web-Based Group Anagram Game". The IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM) 2019. August 27-30, Vancouver, Canada.

- **Doctoral Thesis:** Pipelines for Computational Social Science Experiments and Model Building. Dissertation submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Computer Science and Applications. May 16, 2019, Blacksburg, Virginia.

  https://vtechworks.lib.vt.edu/bitstream/handle/10919/91445/Cedeno_VI_D_2019.pdf

- Vanessa Cedeno-Mieles, Yihui Re, Zhihao Hu, Xinwei Deng, Saliya Ekanayake, Brian J. Goode, Chris J. Kuhlman, Dustin Machi, Madhav V. Marathe, Henning H. Mortveit, Naren Ramakrishnan, Parang Saraf, Nathan Self, Noshir Contractor, Joshua M. Epstein, Michael W. Macy. "Pipelines and Their Compositions for Modeling and Analysis of Controlled Online Networked Social Science Experiments". The Winter Simulation Conference (WSC) 2018. December 9-12, Gothenburg, Sweden.

- Abhijin Adiga, Vanessa Cedeno-Mieles, Chris Kuhlman, Madhav Marathe, S. S. Ravi, Daniel Rosenkrantz, Richard E. Stearns. "Inferring Probabilistic Contagion Models Over Networks Using Active Queries". The 27th ACM International Conference on Information and Knowledge Management (CIKM) 2018. October 22-26, Turin, Italy.

- Yihui Ren, Vanessa Cedeno-Mieles, Zhihao Hu, Xinwei Deng, Abhijin Adiga, Christopher Barrett, Saliya Ekanayake, Brian J. Goode, Gizem Korkmaz, Chris J. Kuhlman, Dustin Machi, Madhav V. Marathe, Naren Ramakrishnan, S. S. Ravi, Parang Saraf, Nathan Self, Noshir Contractor, Joshua M. Epstein, Michael W. Macy. "Generative Modeling of Human Behavior and Social Interactions Using Abductive Analysis". The IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM) 2018. August 28-31, Barcelona, Spain.

- Adaptation of a Collaborative Filtering Recommender Based on the User for Creating an Undergraduate Courses Recommender Based on Student Performance History, by Del Pino, J., Salazar, G., Cedeno, V. Revista Tecnologica ESPOL - RTE, Vol. 24, N. 2, 29 - 34 (December, 2011). ISSN: 1390-3659. http://www.rte.espol.edu.ec/index.php/tecnologica/article/view/85

- **Master Project:** Comparing HadoopDB: A hybrid of DBMS and MapReduce technologies with the DBMS PostgreSQL. Grade:10/10. (April 2010) **Description:** Compare the response time of different types of queries using HadoopDB with PostgreSQL, only against PostgreSQL. Experiments were performed with 8 computers to allow data sharing between different nodes in the cluster.

- **Bachelor Thesis:** Design and development of a P2P messaging application for ESPOL using JXTA technology. Grade: 10/10. (February 2007)

- Design and development of a P2P messaging application for ESPOL using JXTA technology, by V. Cedeno, X. Calle. Revista Tecnologica ESPOL, Vol. 19, N. 1, 93-98, (October, 2006), ISSN : 0257-1749 http://www.rte.espol.edu.ec/index.php/tecnologica/article/view/195

Groups

- Conference Chair. Association of Women in Computing. Virginia Tech Chapter. 08/2016

Research Experience

Jan 2015 - May 2019 Network Dynamics and Simulation Science Laboratory, Blacksburg, VA, United States
Graduate Research Assistant

Data analysis, modeling and simulation of networked online social science experiments.

Technologies: Python, Java, PostgreSQL.

May 2016 - Aug 2016 Lawrence Livermore National Laboratory, Livermore, CA, United States
Computation Summer Intern

High Performance Computing Data Analysis.

Technologies: Python, R.

May 2012 - Dec 2012 CTI - ESPOL, Technology Research Center, Guayaquil, Ecuador
Researcher, Project leader, Database Administrator

Analysis, design and development of the Project, Nivelacion, which objective is to manage the courses Students in Ecuador need to take after high school and before entering a University.

Technologies: Ruby on Rails, MySQL.

Mar 2006 - May 2006 Bank of Guayaquil, Guayaquil, Ecuador
Internship

- System department in the area of Information Technologies of Banco de Guayaquil

- Research for the development of the project, Reference Letters, a bank system to print bank references for clients.

- Development of the web page, Survey of Hobbies and Interest.

Technologies: C#, ASP.Net

Mar 2005 - May 2005 Electric Enterprise, Guayaquil, Ecuador
Internship

- Department of Technology, Processes and Systems Development

- Development of the visualization of specific data and summaries, for the CATEG Budget System.

Technologies: Oracle Developer

Research Advising

Undergraduate Student Graduated, Thesis or Project Based

- Gustavo Crespo P., Susana Veliz M. Using Hadoop platform for the implementation of a program to identify spam messages, 2012.

- Mary Llongo G., Raquel Navas R. Analysis of Advertising Orientation on Web Pages Using Mahout for Massive and Scalable Data Processing, 2012.

- Duarte, V., Garcia, A. Analysis and Comparison of Collaborative filtering Algorithms for a recommendation engine using Mahout , 2012.

- L Gallardo, F Bermeo. Reporting and analysis system about trends in ESPOL web page using Hadoop for massive data processing, 2012.

- M Alcivar, I Espinoza. Analysis of a Transactional database using Hive on Hadoop, 2012.

- J. Herrera Medina, C. Rodr guez Rivera. Search Engine Optimization in ESPOL web page, 2012.

- Loor, M., Loor, F. Training of a predictive model of bank customer defection using Mahout, 2011.

Teaching Experience

- Department of Computer Science, Virginia Tech, Fall 2014
  Title: Graduate Teaching Assistant
  Course: CS 5614 - Big Data Management Systems
  Tasks: Creating assignments, grading homework and project proposals.

- 10/08/2014 Substitute Lecture for Virginia Tech CS 5614 - Big Data Management Systems
  Lecture 12: Frequent Itemsets

- School of Electrical Engineering and Computer Science, Escuela Superior Politecnica del Litoral, Guayaquil, Ecuador, 2010-Present
  Title: Tenure Track Professor
  Undergraduate Courses Taught: FIEC05553-Database Systems I, FIEC05355-Database Systems II, FIEC04341-Programming Fundamentals Graduation Seminar Taught: Massive and Scalable Data Processing.
  Tasks: Career coordinator for Computer Science orientation Technological Systems.

- Department of Computer Science, Florida State University, 2008-2010
  Title: Teaching Assistant
  Course: CGS2060 - Computer Literacy
  Tasks: Teaching lab procedures, grading homework and exams.

Professional Experience

July 2019 - Present   ESPOL, Escuela Superior Polit cnica del Litoral, Guayaquil, Ecuador
Tenure Track Professor

Courses: Database Systems, Advanced Database Systems

Aug 2014 - Dec 2014   Virginia Tech, Blacksburg, Virginia
Graduate Teaching Assistant

- Course: CS 5614 - Big Data Management Systems

May 2010 - July 2014   ESPOL, Escuela Superior Polit cnica del Litoral, Guayaquil, Ecuador
Tenure Track Professor

Career coordinator for Computer Science orientation Technological Systems

Courses: Database Systems I, Database Systems II and Programming Fundamentals, Massive and Scalable Data Processing

Aug 2008 -   Florida State University, Computer Science Department, Tallahassee, Florida
Dec 2009   *Lab helper*

        Career coordinator for Computer Science orientation Technological Systems

        Courses: Computer Literacy

July 2007 -   Electric Enterprise, Guayaquil, Ecuador
July 2008   *Developer*

        Development of a Logistic System

        Technologies: Java, JDeveloper and Oracle

June 2006 -   Llerena and Llerena Software Company, Guayaquil, Ecuador
June 2007   *Project manager*

        Llerena and Llerena Software Company provides services to the System department in the area of Information Technologies of Banco de Guayaquil.

- Analysis, design and development of the Project Cardholder which objective is to manage the inventory, emission, print, delivery of the cards of the bank and all the processes that take place in the transactional service, that relates with the use of the cards

        Technologies: `C#`

Professional Affiliations

- Institute of Electrical and Electronics Engineers (IEEE)
- Association for Computing Machinery (ACM)

Professional Activities

- **Services:** Contest Organizer, Android Application Development, sponsored by ESPOL and Samsung Electronics. 06/2011-10/2011
- **Member of Committees:** Panelist for the election of members of Fulbright Scholarships 2011-2012.

Honors and Awards

- **Nov 2011 - Teaching Merit Diploma:** Awarded by ESPOL, for having obtained a high score in the work as a Professor of the School of Electrical Engineering and Computer Science. In the 2010-2011 period.
- **Mar 2008 - Tuition scholarship and Teaching Assistantship from Florida State University:** Scholarship for Master of Science in Computer Science. August 2008-April 2010.
- **Aug 2007 - FULBRIGHT-SENACYT Scholarship:** Scholarship for Master in the USA. August 2008 - May 2010.
- **Oct 2006 - Academic Award, Mejor egresado, from ESPOL, Escuela Superior Politecnica del Litoral:** Given to the student who attained the highest average grade between the students that finished the coursework for the major Computer Engineering, specialization Information Systems. For the academic year 2005-2006.
- **Oct 2005 - Academic Award from ESPOL, Escuela Superior Politecnica del Litoral:** Given to the student who attained the highest average grade between the students of the major Computer Engineering, specialization Information Systems. For the academic year 2004-2005.

Certificates

- **August 2008:** Certificate for the Program for Instructional Excellence. Florida State University, Tallahassee, Florida.

- **March 2005:** Certificate for approving the Seminar, Object Oriented Business Modeling. Dictated by the ESPOL, Escuela Superior Politecnica del Litoral

Languages

- **First Language:** Spanish.

- **English:** High level (Reading, writing and conversation). 107 TOEFL iBT.

- **French:** Medium level, (Reading, writing and conversation). Studies in the Alliance Francaise of Guayaquil.

Interests

- **Cooking**
- **Traveling**
- **Reading**
- **Skiing**