

CESAR ACOSTA-MEJIA

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ACADEMIC POSITIONS

- University of Southern California, Dept. of Industrial & Systems Engineering,
Senior lecturer 2014-2020
Associate Professor of Engineering Practice 2021-present
- University of Southern California, Viterbi School of Engineering,
MS Analytics, Program Director 2018-present
MS ORE, Program Advisor Aug 2021-present

EDUCATION

- Ph.D., Statistics, The University of Texas at Dallas.
- Ph.D., Industrial Engineering, Texas A&M University.
- MS., Statistics, The University of Texas at Dallas.

AREAS OF INTEREST

Advanced Statistical analysis to build prediction and classification models for improved decision making in applications such as Marketing research, Portfolio Optimizations, volatility forecasting, and Automated trading.

- Computational Statistics
- Predictive Analytics (prediction, classification and clustering methods)

HONORS and DISTINCTIONS

- USC ISE Outstanding Teacher of the Year 2018-2019

TEACHING

- ISE 529, Predictive Analytics, 118 graduate students, Fall 2021
- ISE 529, Predictive Analytics, 34 DEN students, Fall 2021
- ISE 529, Predictive Analytics, 41 graduate students, Summer 2021
- ENGR 596, Engineering Internship, 1 graduate students, Summer 2021
- ISE 535, Data Mining, 54 graduate students, Spring 2021
- ISE 529, Predictive Analytics, 63 graduate students, Spring 2021
- ENGR 596, Engineering Internship, 6 graduate students, Spring 2021

- ISE 529, Predictive Analytics, 81 graduate students, Fall 2020
- ISE 529, Predictive Analytics, 17 DEN students, Fall 2020
- ENGR 596, Engineering Internship, 3 graduate students, Fall 2020
- ENGR 596, Engineering Internship, 6 graduate students, Summer 2020
- ISE 599, Data Mining, 77 graduate students, Spring 2020
- ENGR 596, Engineering Internship, 3 graduate students, Spring 2020
- ISE 435, Discrete Systems Simulation (undergraduate), 3 unit, Fall 2019
- ISE 529, Predictive Analytics (graduate), 3 unit, Fall 2019
- ISE 563, Financial Engineering (graduate), 3 units, Summer 2019
- ISE 563, Financial Engineering DEN (graduate), 3 units, Summer 2019
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Spring 2019
- ISE 563, Financial Engineering (graduate), 3 units, Spring 2019
- ISE 563, Financial Engineering DEN (graduate), 3 units, Spring 2019
- ISE 435, Discrete Systems Simulation (undergraduate), 3 unit, Fall 2018, Inst.Eval.: 4.70
- ISE 529, Engineering Data Analytics (graduate), 3 unit, Fall 2018, Inst.Eval.: 4.44
- ISE 563, Financial Engineering (graduate), 3 units, Fall 2018, Inst.Eval.: 4.54
- ISE 563, Financial Engineering DEN (graduate), 3 units, Fall 2018, Inst.Eval.: 5.00
- ENGR 596, Engineering Internship (graduate), 1 unit, Summer 2018
- ISE 225, Engineering Statistics, (undergraduate), 3 unit, Spring 2018, Inst.Eval.:4.35
- ISE 563, Financial Engineering (graduate), 3 units, Spring 2018 Inst.Eval.: 4.53
- ISE 563, Financial Engineering DEN (graduate), 3 units, Spring 2018 Inst.Eval.:3.25
- ENGR 596, Engineering Internship (graduate), 1 unit, Spring 2018
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2017, Inst.Eval.: 3.63
- ISE 529, Engineering Data Analytics (graduate), 3 unit, Fall 2017, Inst.Eval.: 4.85
- ISE 563, Financial Engineering (graduate), 3 units, Fall 2017, Inst.Eval.: 4.50
- ISE 563, Financial Engineering DEN (graduate), 3 units, Fall 2017, Inst.Eval.: 3.25
- ISE 563, Financial Engineering (graduate), 3 units, Summer 2017, Inst.Eval.: 5.00
- ISE 563, Financial Engineering DEN (graduate), 3 units, Summer 2017, Inst.Eval.: 4.83
- ENGR 596, Engineering Internship (graduate), 1 unit, Summer 2017
- ISE 499, Special Topics, (undergraduate), 3 unit, Spring 2017, Inst.Eval.: 5.00
- ISE 225, Engineering Statistics, (undergraduate), 3 unit, Spring 2017, Inst.Eval.:4.27
- ISE 563, Financial Engineering (graduate), 3 units, Spring 2017 Inst.Eval.: 4.63
- ISE 563, Financial Engineering DEN (graduate), 3 units, Spring 2017 Inst.Eval.:4.50

- ENGR 596, Engineering Internship (graduate), 1 unit, Spring 2017
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2016, Inst.Eval.:4.27
- ISE 529, Engineering Data Analytics(graduate), 3 unit, Fall 2016, Inst.Eval.:4.40
- ISE 563, Financial Engineering (graduate), 3 unit, Fall 2016, Inst.Eval.:5.00
- ISE 563, Financial Engineering DEN (graduate), 3 unit, Fall 2016, Inst.Eval.:
- ISE 563, Financial Engineering (graduate), 3 unit, Summer 2016, Inst.Eval.:5.00
- ISE 563, Financial Engineering DEN (graduate), 3 unit, Summer 2016, Inst.Eval.:4.33
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Spring 2016, Inst.Eval.:4.50
- ISE 225, Engineering Statistics (undergraduate), 3 unit, Spring 2016, Inst.Eval.:4.76
- ISE 563, Financial Engineering (graduate), 3 unit, Spring 2016, Inst.Eval.:4.22
- ISE 563, Financial Engineering DEN (graduate), 3 unit, Spring 2016, Inst.Eval.:4.00
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2015, Inst.Eval.:4.27
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2015, Inst.Eval.:4.38
- ISE 225, Engineering Statistics (undergraduate), 3 unit, Fall 2015, Inst.Eval.:4.00
- ENGR 596, Engineering Internship (graduate), 1 unit, Fall 2015.
- ISE 563, Financial Engineering (graduate), 3 unit, Summer 2015, Inst.Eval.:4.25
- ISE 563, Financial Engineering DEN (graduate), 3 unit, Summer 2015, Inst.Eval.:5.00
- ENGR 596, Engineering Internship (graduate), 1 unit, Fall 2015.
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Spring 2015, Inst.Eval.:4.47
- ISE 529, Engineering Statistics (undergraduate), 3 unit, Spring 2015, Inst.Eval.:4.00
- ISE 563, Financial Engineering (graduate), 3 unit, Spring 2015, Inst.Eval.:4.20
- ISE 563, Financial Engineering DEN (graduate), 3 unit, Spring 2015, Inst.Eval.:3.50
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2014, Inst.Eval.:4.50
- ISE 220, Probability Concepts for Engineering (undergraduate), 3 unit, Fall 2014, Inst.Eval.:4.64
- ISE 563, Financial Engineering (graduate), 3 unit, Fall 2014, Inst.Eval.:4.40

INVITED SPEAKER

- IDEAS 2019 Conference on AI. *Data Science and Analytics. Competing in a Data-driven World.* International Data Engineering and Science Association (IDEAS). www.ideassn.org, October 2019, Los Angeles, CA.
- SatRday LA 2019 *Multiple Response (Multivariate) Regression models in R.* James West Alumni Center, UCLA. Los Angeles R Users Group. April 2019. <https://losangeles2019.satrdays.org/>
- IDEAS 2018 Conference on AI. *Is the Best Predictor actually the best?.* International Data Engineering and Science Association. October 2018, Los Angeles, CA. www.ideassn.org/socal-2018/

UNIVERSITY SERVICE

- MS Analytics Program Director.
 - Recruited 53 new Certified and enrolled students in 20203
 - Recruited 41 new Certified (with delayed enrollment for 2021) students in 20203
 - Recruited 20 new Certified students in 20201
 - Developed new syllabus ISE 543
 - Advised 73 new students, 4 new transfer students, 2 new PDP students.
 - Webinar for prospective NLTX students, October 28, 2020
 - MS Analytics Fall 2020 Students Orientation, August 12, 2020
 - MS Analytics New course ISE 543 proposal, August 31, 2020.
 - Recruited 85 new Certified students in 20193
 - Recruited 5 new Certified students in 20192
 - Recruited 10 new Certified students in 20191
 - Increased Certified admissions rate by 300%
 - Design of new 2020 MS program.
 - Developed two new syllabus (ISE 535, ISE 537).
 - Helped develop two new syllabus (ISE 534, ISE 540).
 - Reviewed over 400 Viterbi applicant files for admission.
 - Advised 86 new students, 4 new transfer students, 3 new PDP students.
 - 2019 Fall MS Students Orientation, August 15, 2019
 - MS Analytics program changes presentation, ISE Advisory Board Meeting, November 7, 2019.
 - MS Analytics proposed changes presentation, Faculty Retreat, September 13, 2019.
- Daniel J. Epstein Department of Industrial & Systems Engineering, USC
 - Academic Integrity Committee Chair for a graduate MS ISE student, May 2020
 - Graduate dispute Committee for an undergraduate ISE student, February 2019.
 - IISE Student Chapter Faculty Advisor
 - 2020 IISE Western Regional Conference preparation meetings
 - ISE Department MS Awards, presenter, Apr 10, Spring 2018
 - 2018 Fall MS Students Advisement Session, August 14, 2018
 - ISE Department Advisory Board Meeting, November 8, 2018, ISE UG Students Best Paper Award
 - ISE Department Advisory Board Meeting, November 8, 2018, MS Analytics presentation.
 - 2018 Staff Employee Award Nomination, Staff Early Career Award successful proposal for ML.
 - DJE Department of Industrial and Systems Engineering, Faculty Retreat, September 7, 2018. MS Analytics presentation.
 - Merit Review Committee, Member, Spring 2017
 - ISE Undergraduate program Committee, Member, Spring 2017
 - STEM ISE Spotlight, March 21, 2017
 - ISE Department MS Awards, presenter, May 02, Spring 2017
 - 2017 Fall MS Students Orientation, August 10, 2017
 - ISE Undergraduate program Committee, Member, Fall 2016

- Advisory Board Meeting
 - Presentation of the new course ISE 529 from the Masters program NLTX, November 1, 2016
- Graduate Committee on redesigning ISE 538, ISE 638 courses, Fall 2016.
- Internship Advisor of MS student, Jay Korada. Spring 2016.
- DJE Department of Industrial and Systems Engineering Retreat, October 7, 2016.
- Faculty Annual Review, Committee Member. Spring 2016
- Math 125,126,226 Course Review, Committee Member. Spring 2015
- Computing Standards for ISE students, Committee Member. Fall 2015
- Viterbi School of Engineering
 - Explore USC, February 12, 2020
 - Explore USC, April 9, 2019.
 - Explore USC Reception, April 19, 2018
 - Faculty Marshal at the 2018 Viterbi Undergraduate Commencement Ceremony, May 11, 2018
 - Trojan Family Weekend, Breakfast Reception, Oct 12, 2018
 - Explore USC Reception, February 27, 2017
 - Viterbi Undergraduate Commencement Ceremony, Faculty Marshal, May 12, 2017
 - Explore USC Reception, February 22, 2016
 - On Campus Admitted Students Reception, OSCAR Meeting, April 24, 2016
 - New Students Luau event, August 20, 2016.
- University of Southern California
 - 2018 USC Commencement Ceremony, Faculty Marshal, May 11, 2018
 - 2017 USC Commencement Ceremony, Faculty Marshal, May 12, 2017
 - 2017 New Students University Convocation, Faculty Marshal, August 17, 2017

UNDERGRADUATE/GRADUATE RESEARCH

- Castro R., Huang S., Liu J., Blay R., Acosta-Mejia C. *Mixtures-based Value at Risk Estimates of Financial Stocks*. Best Track Paper Award at the Third North American International Conference on Industrial Engineering and Operations Management, IEOM Society International, September 2018, Washington, D.C.
- Kim S., Upadhyay S., Acosta-Mejia C. *Using Categorical Variables in Predictive Analytics*, Annual IISE Conference and Expo, May 2018, Orlando, FL.
- Shanjay. Directed Individual/Independent study at Faraday Future Inc. *Migration of iControl payment and billing system to Salesforce* Daniel J. Epstein Department of Industrial and Systems Engineering, ENGR 596, 1.0 credit hours, Completed (January 31, 2017 to May 15, 2017).
- Munoz N., Collins T., Acosta-Mejia C. *Identifying Outliers in Large Mixed Databases*. presented at the Annual IISE Conference and Expo, May 2016, Anaheim, CA. Munoz and Collins, ISE undergraduate senior students supervised by Professor Acosta.
- Lin Z., Chen Z., Acosta-Mejia C. *Robust Multivariate Control Charts*. presented at the Annual IISE Conference and Expo, May 2016, Anaheim, CA. Lin and Chen, ISE and OR masters students supervised by Professor Acosta.

ENGINEERING INTERNS

- Zirui Wang, MS NLTX Student. Aviana Global Tech. Feb 17 to May 17, 2020. Data Science trainee.
- Yuesheng Luo, MS NLTX Student. Wishare Media Group. Feb 19 to Apr 24, 2020. Data Analyst.
- Qian Wu, MS NLTX Student. Leaf Group. Jan 13 to May 15, 2020. Data Analyst.
- Siyuan Fang, MS NLTX Student. Discover Products Inc. May 18 to Aug 7, 2020. Data Analyst.
- Guanyu Chen, MS NLTX Student. Amazon Web Services Inc. May 26 to Aug 14, 2020. Software Development Engineer.
- Naichang Lu, MS ORE Student. Used Cardboard Boxes Inc. May 19 to Aug 20, 2020. Data Analyst.
- Nina Thiebaut, MS NLTX Student. Facebook Inc. May 26 to Aug 14, 2020. Data Scientist.
- Bangzhu Zhu, MS NLTX Student. Huawei Inc. Jun 22 to Aug 21, 2020. Data Analyst.
- Siyu Mao, MS NLTX Student. AssetSmart Inc. Jun 1 to Aug 21, 2020. Technical Data Analyst.
- Zirui Wang, MS NLTX Student. Aviana Global Tech. Aug 24 to Dec 27, 2020. Data Science trainee.
- Yifan He, MS NLTX Student. S-3 Research, LLC. Sep 1 to Dec 17, 2020. Data Science Engineer.
- Yiqing Fan, MS NLTX Student. KRE Consulting, LLC. Sep 1 to Dec 14, 2020. Analytics Associate.
- Shaligram Tanvi, MS ISE Student. Intern at Energy Recovery Inc., Jan 22 to May 4, 2018. *Project Manager Assistant*.
- Yue He, MS ISE Student. Intern at WirelessBro Inc., Jan 8 to May 11, 2018. *Growth Marketing Analyst*.
- Varunya Ilanghovan, MS NLTX Student. Intern at Siemens PLM Software. June 11 to Aug 17, 2018. *Data Analyst*.
- Kanagarajan Shanjay, MS ISE Student. Intern at Faraday Future Inc., *Faraday Future 01 Beta Vehicles*, Daniel J. Epstein Department of Industrial and Systems Engineering, Spring 2017.
- Sinuo Song, MSFE Student. Intern at Amerihome Mortgage Co., *Customer segmentation*, Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2017.
- Upadhyay Sudhanshi, MS ISE Student. Intern at Applied Medical Co., *Product Lifecycle Management*, Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2017.
- Shaligram Tanvi, MS ISE Student. Intern at Energy Recovery Inc., *Quality Engineering - Ceramic Lab*, Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2017.
- Lakshman Supritha, MS EM Student. Intern at Mindtree Ltd., *Application Management services (AMS) with S/4 HANA*, Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2017.
- Liu Jiajian, MS ISE Student. Intern at D.F. Stauffer Biscuit Co., *Manufacturing process improvement project*, Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2017.
- Korada, J. Directed Individual/Independent study at Internet Brands Co. *Migration of iControl payment and billing system to Salesforce* Daniel J. Epstein Department of Industrial and Systems Engineering, Spring 2016

- Korada, J. Directed Individual/Independent study at US veterans Initiative. *Fixed Reconciliation of IT assets of US veterans Initiative and its regional offices* Daniel J. Epstein Department of Industrial and Systems Engineering, Fall 2016
- Xu, T. Directed Individual/Independent study at IMAX Corp., Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2016
- Chithara, R. Directed Individual/Independent study at Camino Real Foods Inc., Daniel J. Epstein Department of Industrial and Systems Engineering, Summer 2015

PRESENTATIONS

- Kim S., Upadhyay S., Acosta-Mejia C., Using Categorical Variables in Predictive Analytics, Annual IISE Conference and Expo, May 2018, Orlando, FL.
- Castro R., Huang S., Liu J., Acosta-Mejia C., Mixtures-based Value at Risk Estimates of Financial Stocks, 3rd. North America IEOM Conference, September 2018, Washington, D.C.
- Munoz N., Collins T., Acosta Mejia C., Identifying Outliers in large mixed databases. Annual Industrial and Systems Engineering Conference and Expo, Institute of Industrial Engineers, May 2016, Anaheim, CA
- Lin Z., Chen Z., Acosta Mejia C., Robust Multivariate Control Charts. Annual Industrial and Systems Engineering Conference and Expo, Institute of Industrial Engineers, May 2016, Anaheim, CA
- Acosta-Mejia, C. A., Yarto G. J., The Modified Run Sum chart. Annual Industrial and Systems Engineering Conference and Expo, Institute of Industrial Engineers, May 2010, Cancun, Mexico
- Acosta-Mejia, C. A., The Run Sum R chart. Annual Industrial and Systems Engineering Conference and Expo, Institute of Industrial Engineers, May 2010, Cancun, Mexico

REFEREED PUBLICATIONS

- Acosta-Mejia, C. A., Rincon, L. A., "The Continuous Run Sum chart", *Communications in Statistics - Theory and Methods*, 43: 4371 - 4383, 2014.
- Acosta-Mejia, C. A., "Two-sided charts for monitoring nonconforming parts per million", *Quality Engineering*, 25, pp. 34 - 45, 2012.
- Acosta-Mejia, C. A., "On the Performance of the Conditional Decision Procedure in Geometric charts", *Computers and Industrial Engineering*, 61, pp. 905 - 910, 2011.
- Acosta-Mejia, C. A., Pignatiello J. J., "The Run Sum R chart with fast initial response", *Communications in Statistics - Simulation and Computation*, 39, pp. 921 - 932, 2010.
- Acosta-Mejia, C. A., Pignatiello J. J., "ARL-Design of S Charts with k -of- k Runs Rules", *Communications in Statistics - Simulation and Computation*, 38, pp. 1625 - 1639, 2009.
- Acosta-Mejia, C. A., Pignatiello J. J., "Modified R charts for improved performance", *Quality Engineering*, 20, pp. 361 - 369, 2008.
- Acosta-Mejia, C. A., "Two sets of runs rules for the \bar{X} chart", *Quality Engineering*, 19, pp. 129 -136, 2007.
- Acosta-Mejia, C. A. Pignatiello J. J., "Monitoring the Variability of Symmetric Processes", *International Journal of Industrial Engineering*, 9, pp. 151-161, 2002.
- Acosta-Mejia, C. A., Pignatiello J. J., "Monitoring Process Dispersion with no Sub-grouping", *Journal of Quality Technology*, 32, pp. 89-102, 2000
- Acosta-Mejia, C. A., Pignatiello, J. J., Rao, V. B., "A Comparison of Control Charting Procedures for Monitoring Process Dispersion", *IIE Transactions*, 31, pp. 569-579, 1999
- Acosta-Mejia, C. A., "Improved p charts to Monitor Process Quality", *IIE Transactions*, 31, pp. 509-516, 1999
- Acosta-Mejia, C. A., "Monitoring Reduction in Variability using the Range", *IIE Transactions*, 30, pp. 515-523, 1999

ACADEMIC PROJECTS

- Improved an S&P 500 Investment tracking portfolio by changing the assets allocation to reduce the associated risk. USC, December 2018.
- Compared the performance of Random Forest with Multinomial Regression to classify customers into several market segments. USC, July 2018.
- Optimized Marketing Resource allocation to improve customer Acquisition and Retention. USC, July 2017.

SERVICE

- Editorial Board Member, *Quality Engineering*
- Journals
 - Communications in Statistics - Simulation and Computation
 - Quality Engineering
- Conference papers
 - Industrial and Systems Engineering Research Conference
 - International Conference on Industrial Engineering and Operations Management
- Book Proposal Reviewer, CRC Press

PROFESIONAL SOCIETIES

- The European Network of Business and Industrial Statistics
- Los Angeles *R* Users Group