



The Spring 2025 Adjunct Faculty Spotlight is on

Dr. Shilpa Gupta



Shilpa Gupta is a Lecturer in the Industrial and Systems Engineering department at SJSU since the Spring of 2020. She received Ph.D. in Industrial Engineering from Arizona State University, and B.E. (Hons) in Mechanical Engineering from BITS, Pilani in India. After receiving her doctorate, she worked in the industry as a data scientist for about a decade.

Dr. Gupta has engaged with a variety of intriguing problems in her career so far, including the development of novel algorithms for monitoring linear and polynomial profiles, building price-sensitive predictive models, employing Bayesian methods to tackle cold start challenges, quantifying the impact of emerging infectious diseases on insurance portfolios, mortality profile modeling to predict human longevity, scaling time series models, creating novel metrics for tracking engagement on economic graphs, design and analysis of experiments on social graphs, and machine learning model health assurance at scale. Her contributions have resulted in patent applications, business impacting projects, journal articles, conference proceedings, and presentations. Her current research interests are quality engineering and data science education.

At SJSU ISE department, Dr. Gupta has taught a variety of courses (in no particular order): ISE 194, ISE 201, ISE 244, ISE 202 , ISE 205 , ISE 233 , ISE 235 , CMPE 257. She designed a new course on Data Ethics which was offered for the first time in Fall 2024. She secured Service-Learning Curriculum Development Grant to include a service-learning component in ISE 194. Students used R/Python programming skills learnt in the course to transform, analyze and visualize data provided by San Jose Environmental Services Division on Direct Discharge Trash Control Program.

Dr. Gupta has contributed her experience as a committee member in designing Operational Analytics program. She is passionate about evidence-based teaching methods and regularly participates in relevant forums to learn and share teaching experiences. At SJSU she has participated in faculty groups FLC on Authentic Assessment, COE FLC on student success and teaching for equity, Engineering Course Design Advisory Committee. She has contributed a module to the SJSU Resilient Course Design Program which was open to all SJSU faculty during Summer 2021 and Winter 2021. She has served as a reviewer for ASA's Undergraduate Statistics Project Competition and American Society for Engineering Education.

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Dr. Shilpa Gupta, cont.

Outside of SJSU, she has contributed to her discipline by serving on the International Statistical Engineering Association (ISEA) webinar and conference committees. In that role, she regularly organizes webinars of leading researchers and industry professionals in Statistical Engineering. She is the Chair of the organizing committee for the 2025 ISEA Summit to be held in October. She is on the Statistical Review Board for MERLOT.

Dr. Gupta is very passionate about engaging and encouraging the next generation of Data Science Leaders. She regularly volunteers her time to mentor women and the broader BIPOC community with nonprofit organizations such as ASA Section on Statistics and Data Science Education High School Teacher Fellows Program, WiDS Faculty Mentor, AI4ALL, KaggleX BIPOC, among others. At More Active Girls In Computing (MAGIC) she mentored middle and high school girls on STEM projects. Most of her mentoring experience has involved coaching the mentee on implementation of a passion project in STEM or Data Science or AI/ML. This approach has resulted in building mentee's project portfolio and improved confidence as a result of hands-on experience. The topics have ranged from deep learning models for time series, NLP approaches for customer feedback, electric vehicle performance analysis, climate modeling, sudoku solver, among others.

Dr. Gupta loves spending time with her kids, whether it's cooking, reading, playing games, or simply goofing around. She cherishes these moments, as well as the time spent with her family and friends.