# Influential Women Features Juie Shetye, PhD: Connecting Solar Physics And AI Research At New Mexico State University

LAS CRUCES, NM, UNITED STATES, October 5, 2026 /EINPresswire.com/ -- Advancing Space-Weather Science Through Solar Observations, Data Science, Mentorship, and Meaningful Collaboration



Las Cruces, New Mexico – Julie Shetye, PhD, is an assistant professor of astronomy at New Mexico State University and Science Lead at the Sunspot Solar Observatory, where she specializes in solar physics and space weather. Her research examines how solar activity, including flares, magnetic variability, and chromospheric dynamics, affects Earth's near-space environment. By combining high-resolution solar observations with data science, statistics, and artificial intelligence and machine learning methods, Juie works to improve nowcasting and risk assessment for satellites, aviation systems, and communication infrastructure.

Her research also connects fundamental solar physics with operational space-weather forecasting applications through collaborations with organizations such as NASA and the National Science Foundation. With six years of professional experience and six awards received, Juie has developed a research program that brings together observational astrophysics, solar atmosphere modeling, time-series analysis, and modern computational methods.

Juie's academic foundation in physics and space science was shaped through studies at the University of Mumbai, University College London, and Queen's University Belfast, where she earned her Ph.D. She subsequently completed postdoctoral research at the University of Warwick. Across these institutions, she developed expertise in understanding solar phenomena

through observations, modeling, and data analysis before joining New Mexico State University in 2021.

Since joining the university, Juie has expanded her research through federally funded initiatives supported by NASA and the National Science Foundation. Her work reflects the increasingly important connection between solar activity and technologies and systems on Earth and in space. Space weather has implications for satellite resilience, aviation safety, communications, and critical infrastructure, creating opportunities for scientists to work across disciplines and translate scientific discoveries into practical applications.

Alongside her research, Juie is committed to education, mentorship, and expanding access to STEM pathways for underrepresented and first-generation students. She leads research training programs that introduce undergraduate and graduate students to space physics, AI-driven science, and NASA-relevant careers. Her approach emphasizes hands-on participation in funded research projects and scientific publishing, helping students gain experience while contributing to active scientific work.

For Juie, mentorship is closely connected to her own personal journey. She attributes her success to her grandmother, who raised her and encouraged her toward education and independence while her parents worked. Her grandmother also shared stories of fighting for India's freedom, inspiring Juie to pursue opportunities that she herself never had. That influence continues to shape Juie's perspective on education, opportunity, and personal determination.

The career advice that has guided Juie is equally direct: never give up fighting for one's rights, believe in oneself and what one is doing, and learn to navigate challenges without shutting up. She has carried that mindset into a field where she says one of the biggest challenges is learning to lead with clarity and courage, particularly in situations where she may be underestimated or misunderstood.

Rather than allowing those moments to define her path, Juie views challenges as opportunities to sharpen her purpose and build new pathways. She encourages young women entering her industry to have grit and stay true to who they're. She believes challenges will come, but courage develops by moving through them. For Juie, maintaining the spark that inspires women to dream, lead, and create change is essential. And no one can take that spark away.

She is also excited about the possibilities emerging at the intersection of scientific research and entrepreneurship. Juie is moving toward startup development with like-minded colleagues, with the goal of translating scientific work into practical, scalable solutions. She sees collaboration among academia, industry, defense, and engineering as an important part of the future of space-weather research.

Her professional development is supported by certifications in areas including neural networks and convolutional neural networks, PyTorch and deep learning, Python, data analysis, artificial

intelligence foundations, machine learning, and data science. She is also a member of the American Geophysical Union, a Fellow of the Royal Astronomical Society, and a member of the Institute of Physics.

At the center of Julie's approach are empathy and integrity. Empathy allows her to recognize the humanity and effort of the people around her, while integrity keeps her committed to honesty in her research, responsibilities, and personal decisions. Together, these values guide how she approaches science, leadership, mentorship, and collaboration.

As her work continues across solar physics, AI-driven science, education, and emerging startup opportunities, Juie remains focused on meaningful work and values rather than applause. Her perspective is reflected in her own words: "Confidence comes from moving forward with clarity and integrity, not from waiting for approval. I measure my path by meaningful work and values, not applause."

Learn More about Juie Shetye:

Through her Influential Women profile: https://influentialwomen.com/connect/juie-shetye

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