Daisy Kalra

PhD from Panjab U. and Fermilab (NOvA Experiment)

Used machine learning for cross section measurement with the NOvA ND.
Performed detailed GEANT4 and FLUGG simulations to optimize neutrino flux and high-power target systems for NOvA and PIP-II.

Postdoc at Columbia U. & based at Fermilab (MicroBooNE, SBND, and DUNE experiments)

Designed and implemented deep learning models to search for rare physics signatures
JINST 19 (2024) 07, P07032
Developed and deployed online and real-time data-driven data processing architecture.
Will be available on arXiv today
Led data acquisition commissioning and detector operations for SBND.
Columbia News

- Postdoctoral Research Associate, UTK on Muon Collider
- Started working on muon collider since January 2026.
  - Current:
    - Muon ionization cooling with HFOFO lattice – Studying muon beam dynamics
    - Neutrino interactions with GEANT4 in the MAIA detector - Built a user-friendly GEANT4 model to simulate neutrino interactions in the MAIA detector Geant4MuC
  - Near term:
    - Neutrino radiation mitigation studies.
    - Very interested in using AI/ML methods.