Departmental Roles Statement

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As a faculty member, I intend to contribute broadly to departmental research, teaching, mentorship, and service.

RESEARCH CONTRIBUTIONS

My expertise lies at the intersection of astrophysics and artificial intelligence, with a focus on machine learning, symbolic regression, and causal discovery. These approaches complement observational and theoretical efforts, offering new tools to extract fundamental insights from large and complex datasets. I plan to establish a research program that attracts external funding, fosters interdisciplinary collaborations, and raises the department's visibility within the broader astrophysical community.

TEACHING AND CURRICULUM

I am prepared to teach at both the undergraduate and graduate levels, including introductory astronomy, astrophysics, and computational methods. My background across observational astronomy, numerical simulations, and data science also positions me to develop new courses in machine learning for astrophysics and data-driven approaches to science. I aim to integrate research-based projects into coursework to deepen student engagement and prepare them with transferable skills.

MENTORSHIP AND STUDENT ENGAGEMENT

I am committed to creating a dynamic and inclusive environment for student research. My projects naturally lend themselves to undergraduate- and graduate-level involvement, offering opportunities in coding, data analysis, and scientific interpretation. I place strong emphasis on mentoring students to present their work, publish results, and pursue diverse career pathways.

SERVICE AND COLLABORATION

I will actively participate in departmental service such as curriculum development, committee work, and outreach. I also aim to build collaborations within the university and with external institutions, helping the department expand its role in cross-disciplinary initiatives and prepare for the data-rich future of astronomy.

In summary, I view my role as contributing to the growth of the department's research profile, enhancing its curriculum, mentoring students at all levels, and supporting the collegial service that sustains the academic community.

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