University of Wyoming | College of Engineering and Applied Science | Electrical Engineering and Computer Science

PhD Position Opportunity: Computer Vision and Applied Deep Learning

Dr. Vinit Katariya's research group is seeking exceptional PhD candidates to join our team in developing cutting-edge vision models for real-world smart applications in intelligent transportation and smart city systems. Our research focuses on leveraging the latest advances in artificial intelligence to create best-in-class models for multimodal trajectory prediction, behavior analysis, smart monitoring, and developing innovative solutions through multidisciplinary approaches.

The successful candidate will work in a collaborative research environment that bridges computer vision, deep learning, and practical applications addressing modern urban challenges. Our lab emphasizes translating theoretical advances into deployable solutions that have real-world impact.

Available Positions

Start Date: Spring 2026 or Fall 2026

Position: Full-time PhD Research Assistantship with competitive funding

Minimum Qualifications

Educational Background: Bachelor's or Master's degree in Computer Science, Electrical Engineering, Computer Engineering, Data Science, Statistics, Mathematics, or related field with strong computational focus.

Technical Expertise: Demonstrated proficiency in programming languages including Python (required), C++, and RUST. Strong statistical and computational skills are essential. Candidates must have hands-on experience with machine learning frameworks such as PyTorch, TensorFlow, or JAX.

Research Foundation: Solid understanding of machine learning principles, computer vision fundamentals, and deep learning architectures. Experience with neural network implementation and optimization is highly valued.

Preferred Qualifications

Advanced Technical Skills: Experience with computer vision tasks including image processing, object detection, video analysis, and 3D vision. Familiarity with transformer

architectures, attention mechanisms, generative models, and multimodal learning approaches. Knowledge of graph neural networks for spatial-temporal modeling and reinforcement learning applications.

Research Excellence: Strong publication record in premier conferences such as CVPR, ICCV, ECCV, NeurIPS, ICML, or related venues. Demonstrated ability to conduct independent research and contribute to open-source projects. Experience with large-scale dataset handling and distributed computing environments.

Professional Skills: Excellent written and verbal communication abilities. Proven track record of collaborative research and interdisciplinary problem-solving. Leadership experience in research projects or team environments.

Research Environment and Opportunities

Our research group provides access to state-of-the-art computing resources and extensive datasets for computer vision and deep learning research. PhD students will have opportunities to collaborate with industry partners, present research at international conferences, and contribute to high-impact publications. The position includes mentorship from experienced faculty, participation in cutting-edge research projects, and training across multiple disciplines.

We maintain strong connections with the broader AI research community and encourage students to engage with external collaborators, pursue internships, and develop their professional networks within academia and industry.

Application Process

Interested candidates should directly send a detailed curriculum vitae, academic transcripts, a research statement describing career goals and research interests, repositories, or significant projects to vkatariy@uwyo.edu.

For questions regarding this position or the application process, please contact Dr. Katariya directly. Prospective students are encouraged to review recent publications and ongoing research projects before reaching out.

The University of Wyoming is an equal opportunity employer committed to building a diverse and inclusive research community.