Areas for Summer Internship 2025 for UG Students

Name of Faculty Mentor	Area of Summer Internship 2025	Remarks
Department of Astronomy, Astr	ophysics and Space Engineering (DAASE)	
<u>Dr. Unmesh Khati</u>	1. Drone applications and data analysis;	
	2. Synthetic Aperture Radar data processing;	
	3. Remote Sensing and GIS;	
	4. AI/ML applications in geospatial data analysis;	
	5. Time-series data analysis;	
	6. Disaster mapping using satellites;	
Dr. Siddharth Savyasachi Malu	Space Science and Astronomy	
Department of Biosciences and	Biomedical Engineering (BSBE)	
<u>Dr. Hitendra Kumar</u>	Numerical modeling for scaffolds design; Reacting flow simulations in porous media for	
Der Common Charadan	biomedical applications	
Dr. Sourav Chandra	Sensor based bio-mechanical analysis of human limb movements	
Dr. Lokesh Basavarajappa	Development of algorithms for microvessel detection using ultrasound.	
Professor Mirza S. Baig	Inflammation and cancer	
Department of Chemistry		
<u>Professor Chelvam Venkatesh</u>	Synthesis of Anti-cancer Natural Products, Heterocycles, Carbocycles, Small Molecule Inhibitors, Diagnostic and Therapeutic Applications of New Targeting Ligands for	

	Cancer, Inflammatory, Infectious and Neurodegenerative Diseases, Synthesis of	
	Inhibitors for Drug Targets, Drug Delivery Systems, Near-infrared Fluorescence and	
	Nuclear Radioisotopes Imaging, Bio-conjugate chemistry, Nanomaterials for Biodiesel	
	Production	
<u>Professor Sampak Samanta</u>	Synthetic Organic Chemistry	
Department of Chemical Engine	eering	
Dr. Rajan Singh	ASPEN Flow-sheeting of biomass gasification to produce Hydrogen	
<u>Dr. R. Kailasham</u>	Polymer physics, rheology, active matter	
Department of Civil Engineering	g (CE)	
Professor Manish Kumar Goyal	Water, Environment, Climate Change, AI, GIS	
Dr. Mayur Shirish Jain	Environmental Sustainability	
Dr. Ashootosh Mandpe	Environmental Engineering: Waste (Solid & Liquid) Management, Circular Economy, Sustainability.	
<u>Dr. Priyank J. Sharma</u>	Machine Learning based Hydrological Modelling, Climate Extremes, Floods and Droughts	
Department of Computer Science	ce and Engineering (CSE)	
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Professor Somnath Dey	Computer Vision and Machine Learning	
Professor Surya Prakash	Computer Vision and Deep Learning	
Dr. Soumi Chattopadhyay	Deep Learning, Multimodal Recommendation System	
Dr. Chandresh Kumar Maurya	AI, ML, CV, and NLP	
<u>Dr. Nagendra Kumar</u>	Machine Learning, Deep Learning, Computer Vision, Natural Language Processing	
<u>Dr. Puneet Gupta</u>	Deep learning	
<u>Dr. Ayan Mondal</u>	IoT and computing	
<u>Professor Anirban Sengupta</u>	Hardware security, IP protection and CAD VLSI	
Department of Electrical Engine	eering (EE)	

Dr. Sharad Kumar Singh	Robotics, Control and Optimization	
Dr. Lokesh Kumar Dewangan	Power Electronics and Power Systems	
Dr. Appina Balasubramanyam	Image processing and Machine learning	
Dr. Rinkee Chopra	High power Microwave System	
<u>Dr. Santosh Kumar Vishvakarma</u>	VLSI Chip for AI	
<u>Dr. Shaibal Mukherjee</u>	Cloud computing and PCB layout design	
<u>Dr. Swaminathan R</u>	6G Communications	
Professor Vimal Bhatia	1. AI/ML and Signal Processing	
	2. Wireless Communications (5/6G)	
	3. Quantum Communications	
<u>Dr. Dibbendu Roy</u>	LLMs for communication networks	
School of Humanities and Social	Sciences (HSS)	
<u>Dr. Aratrika Das</u>	Medical Humanities	
<u>Professor Pritee Sharma</u>	Environmental Economics	
<u>Dr. Thapasya J.</u>	Linguistics	
Dr. Kalandi Charan Pradhan	Development Economics, Sustainable Development and Socioeconomic impacts of	
	climate change	
Department of Mathematics		
D. M. I. I. I.		
Dr. Mohd. Arshad	Statistical Machine Learning	
Dr. Santanu Manna	Localised wave in shell structure	
<u>Professor M. Tanveer</u>	AI/ML/DL	
Department of Mechanical Engin	leering (ME)	
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Dr. Santosh Kumar Sahu	Cooling of electronic components, battery modules, jet impingement, phase change	

D. H. L. L. W. L.	materials	
Dr. Harekrishna Yadav	Flow, Heat transfer and energy	
<u>Dr. Vibhor Pandhare</u>	Digital Twins and Artificial Intelligence with application in Healthcare and	
	Manufacturing	
<u>Dr. S Janakiraman</u>	Next Generation Energy Storage Battery Materials	
<u>Dr. Satyanarayan Patel</u>	Piezoelectric, pyroelectric materials and energy storage	
<u>Dr. Aman Khurana</u>	Design and development of automated stretching mechanism for elastomeric	
	membranes.	
Dr. Krishna Mohan Kumar	Automotive Noise and Vibration Control	
Department of Metallurgy Engin	eering and Materials Science (MEMS)	
<u>Dr. Dhirendra Kumar Rai</u>	Energy Storage (Battery and Supercapacitor)	
Dr. Rupesh S. Devan	Nanomaterials for energy storage or conversion	
<u>Dr. Mrigendra Dubey</u>	Soft Materials	
Dr. Santosh S. Hosmani	Surface Engineering, Surface Alloying, Coatings, Tribology, Microstructure-Property	
	Correlation	
Dr. Eswara Prasad Korimilli	1.Mechanical behavior of Advanced material	
	2.Tribological behavior of additively manufactured steels	
	3.Effect of heat treatment on the microstructural evolution of tool steels and their	
	mechanical properties.	
Department of Physics		
<u>Dr. Dipankar Das</u>	Advanced topics in Quantum Mechanics, Introductory Particle Physics, Computational	
Professor Somaditya Sen	Semiconductor Materials and Characterization	
<u>Dr. Rajesh Kumar</u>	Smart electrochromic windows; Supercapacitors and energy storage; Nanoscience and	
	nanotechnology; Raman spectroscopy and Raman microscopy	
<u>Dr. Raghunath Sahoo</u>	High energy nuclear physics and quark-gluon plasma, application of machine learning.	
Professor Pankaj R. Sagdeo	1.Fabrication and characterization of nano material.	

	2. Fabrication and Characterization of multifunctional materials for various	
	applications	
<u>Dr. Debajyoti Sarkar</u>	1. Chaos in fields and strings and gravity	
	2. Quantum information theory and AdS/CFT duality	
Dr. Onkar Sharad Game	1. Halide perovskite Optoelectronics	
	2. Next generation perovskite solar cells	
<u>Professor Sarika Jalan</u>	Nonlinear Dynamics and complex systems	
Professor Ankhi Roy	1. Study of heavy flavour production	
	2. Particle Detectors and Simulation	

Note:

- 1. The Internship fees, once paid, are non-refundable.
- 2. The undergraduate students must contact the faculty mentor with any query/clarification.
- 3. Written email consent from the faculty mentor of IIT Indore is a must.
- 4. The last date to fill out the application form is March 31, 2025.
- 5. Only the selected students will get the payment link in April 2025.