Call for Applications for IIIT-B Summer Research Internship Program SRIP 2025

Applications are invited from interested students to the IIIT-B Summer Internship Program (SRIP) 2025. This is a unique internship programme being offered at IIIT-B for giving engineering students an opportunity to work on a real-world funded research project.

Programme Details

Further details regarding SRIP 2025 are as follows:

Name of programme	IIITB Summer Research Internship Program (SRIP) 2025
Minimum eligibility	Students who have completed (or completing) 2nd Year in BE/BTech/Integrated MTech can apply. Specific projects may have additional minimum eligibility requirements. Open to IIIT-B students as well as students from other institutions.
Stipend and Certificate	Internship certificate will be paid upon satisfactory completion of the internship. Where available, stipend will be notified in the internship offer letter.
Internship Dates	A minimum of 8 weeks cumulative duration between May 15 – July 31, 2025
Hybrid Mode	Mandatory 4 weeks of on-campus work between May 15-June 30 as per availability of project guide. Remaining 4 weeks of work to be completed remotely
Hostel Facility	Limited hostel facility available for on-campus work for outstation candidates. Applicable fees of Rs. 5000 food and accommodation will be adjusted against the stipend.
Total positions available	30 (approx..)
Last Date to Apply	April 30, 2025 11.59 PM
Application Link	https://forms.gle/iqVZCZLQxXbtNz4t7

Selection Procedure

Project mentors will go through the applications and select interns for the project. Project mentors may optionally choose to interview short-listed candidates. The decision of the project mentors is final.

Application Procedure

1. Carefully go through the list of projects listed in this document.
2. You may apply by filling in the form with all requested details.
3. Prepare and upload a recently updated resume as part of the application form. Ensure there is a section titled "**Skills and Competencies**" in your resume where you list specific skills and abilities.

Project Descriptions

A brief description of the projects is provided for your reference. In order to enable a quick selection process, students are advised to apply only for those projects where the student meets the stated requirements. Go to the application link only after going through project requirements.

Project-Code	2025-P030
Faculty-in-charge	Prof. Amrita Mishra
Lab/Center Name	Networking and communication research lab
Project title	Machine learning for future communication systems
Brief project description	
Skills / Competencies	Basics of linear algebra, probability/random variables, communication systems, signal processing

Project-Code	2025-P005
Faculty-in-charge	Prof. Thangaraju B
Lab/Center Name	CTRI-DG
Project title	Accelerating Software Delivery: Implementing a DevOps CI/CD Pipeline
Brief project description	This project focuses on building a complete DevOps CI/CD pipeline to automate and accelerate software development and deployment processes. By integrating development, testing, and operations, the goal is to streamline workflows, minimize manual errors, and enable faster time-to-market.
Skills / Competencies	• Programming in Python / Java / JavaScript • Familiarity with Git, CI/CD tools, Docker, and Kubernetes • Experience writing automated tests and shell scripts (Bash) • Understanding of DevOps principles

Project-Code	2025-P024
Faculty-in-charge	Prof. Viswanath G
Lab/Center Name	3D Vision and Language
Project title	Language Guided Object Navigation in 3D Indoor Scenes
Brief project description	Autonomous movement inside indoor spaces guided by language instructions and vision + depth data. Expected learning outcome involves handling exposure to 3D indoor databases, training vision and language models

Skills / Competencies	Computer Vision , Reinforcement Learning

Project-Code	2025-P054
Faculty-in-charge	Prof. Srinath Srinivasa
Lab/Center Name	Web Science Lab (WSL)
Project title	IUDX Web Development (UI)
Brief project description	A responsive portal interface enabling users to view, grant, and revoke data sharing permissions with intuitive dashboards and consent management workflows.
Skills / Competencies	React, Figma(knowledge is a plus)

Project-Code	2025-P063
Faculty-in-charge	Prof. Kurian Polachan
Lab/Center Name	Connected Devices and Wearables Lab
Project title	Developing Hardware Systems for Internet of Bodies
Brief project description	Developing hardware components, e.g., wearables/communication modules for Internet of Bodies. Gain hands on experience with circuit design and embedded system development.
Skills / Competencies	Embedded Systems, Circuit Design

Project-Code	2025-P041
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - Templates
Brief project description	Create Backend Templates for chosen use cases Create Frontend templates for chosen use cases Create a template marketplace in the RASP Designer
Skills / Competencies	React + SpringBoot

Project-Code	2025-P048
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	Center for Internet of Ethical Things
Project title	GRAIL4ES - Guard Rail Architecture for Ethical Software

Brief project description	Project involves creation of software development framework that enables Java applications to be ethically compliant
Skills / Competencies	Software Architecture course and/or Data Modeling course; Strong / deep knowledge of Java and design patterns; database programming

Project-Code	2025-P034
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - Architecture
Brief project description	Microservice, Testing Load balancing with multiple application servers
Skills / Competencies	Java SpringBoot

Project-Code	2025-P039
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - AI
Brief project description	Explore AI tools - bolt.new, https://www.byggr.ai/ Code generatioin using LLMs/AI tools
Skills / Competencies	LLM - Generative AI

Project-Code	2025-P012
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	AI Hardware Accelerator Design
Brief project description	Demonstrate a working prototype of AI Hardware Accelerator to be adopted by industry and possible publication in international conference or reputed journal.
Skills / Competencies	Verilog , Python, ASIC flow, FPGA flow, RISC-V architecture

Project-Code	2025-P036
Faculty-in-charge	Prof. Chandrashekar Ramanathan

Lab/Center Name	CTRI
Project title	RASP - Workflow
Brief project description	Workflow integration Rules engine -- Drools Maestro/Netflix Workflow support in the designer n8n
Skills / Competencies	Java SpringBoot/React

Project-Code	2025-P058
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	Hardware Design of Filters
Brief project description	Design & Characterize the hardware design of filter & processing
Skills / Competencies	Python, Verilog, ASIC flow, FPGA flow, Circuit Theory, Basics of ML

Project-Code	2025-P059
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware system Lab
Project title	Compute Enginer & Memory Design
Brief project description	Compute Enginer & Memory Design
Skills / Competencies	Python, Verilog, ASIC flow, FPGA flow, Circuit Theory, Basics of ML

Project-Code	2025-P060
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	Sensors & Actuators Design
Brief project description	Sensors & Actuators Design
Skills / Competencies	CAD design, 3D Printing, ROS, Microcontroller, Sensors Interface, Circuit design skills

Project-Code	2025-P061
Faculty-in-charge	Prof. Ashok Balakrishnan
Lab/Center Name	Complex Systems & Soft Matter Physics (CSSMP)
Project title	Quantum computation and nonlinear oscillators
Brief project description	The project involves theoretical (analytical & computational) studies where dynamical systems theory & mathematical modelling are used along with quantum mechanics in investigating systems in the context of quantum computation & quantum sensing.
Skills / Competencies	Sound knowledge of basic quantum mechanics, with good coding skills. Knowledge of nonlinear dynamics is desirable.

Project-Code	2025-P033
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - Inbuilt services
Brief project description	Document management service, Notification service, Compression service, image processing service
Skills / Competencies	Java SpringBoot

Project-Code	2025-P018
Faculty-in-charge	Prof. Sakshi Arora
Lab/Center Name	
Project title	Analog layoutand tapeout setup
Brief project description	
Skills / Competencies	Analog Layout

Project-Code	2025-P006
Faculty-in-charge	Prof. V Sridhar
Lab/Center Name	
Project title	Analyzing spectrum auction data
Brief project description	Analyzing and visualizing large scale radio spectrum pricing data including recent 5G auctions

Skills / Competencies	data analytics, visualization

Project-Code	2025-P029
Faculty-in-charge	Prof. Sujit Kumar Chakrabrati
Lab/Center Name	Software Engineering and Analysis Laboratory
Project title	Automated Test Generation for Library Software
Brief project description	Algorithm for auto-generating complex data-structures for testing library software
Skills / Competencies	Programming languages, model checking basics, fuzz testing

Project-Code	2025-P035
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - RBAC
Brief project description	Enhancements to RBAC
Skills / Competencies	Java SpringBoot/React

Project-Code	2025-P037
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP Designer and Frontend
Brief project description	Responsive layout design support in the designer
Skills / Competencies	React

Project-Code	2025-P040
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - DevOps

Brief project description	Create CI/CD Pipeline for RASP project
Skills / Competencies	DevOps Technology

Project-Code	2025-P049
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	Hardware Security
Brief project description	Demonstrate a working prototype on either AES, ECC or ECDSA processor design.
Skills / Competencies	Python, Verilog, ASIC flow, FPGA flow, Circuit Theory, Basics of ML

Project-Code	2025-P050
Faculty-in-charge	Prof. Srinath Srinivasa
Lab/Center Name	Web Science Lab (WSL)
Project title	IndicNLP
Brief project description	Working with noisy/uncleaned audio files to extract transcripts using different ASR models, setup an NLP pipeline for knowledge management using the extracted transcripts. Also using the transcripts for additional analysis such as KWIC, and for tasks like question-answering.
Skills / Competencies	Knowledge of basic NLP tasks

Project-Code	2025-P051
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	In-Memory Computing
Brief project description	Demonstrate IMC working prototype for CNN
Skills / Competencies	Python, Algorithms, Verilog, Analog Circuits, Digital Design

Project-Code	2025-P056

Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	GEMM Accelerators
Brief project description	Demonstrate working of a fast GEMM hardware accelerators
Skills / Competencies	Python, Verilog, FPGA flow, ASIC flow, Circuit Theory, ML

Project-Code	2025-P057
Faculty-in-charge	Prof. Madhav Rao
Lab/Center Name	Intelligent Hardware Systems Lab
Project title	Systolic Array Generator
Brief project description	Demonstrate working of Systolic Generator
Skills / Competencies	Python, Verilog, FPGA flow, ASIC flow, Circuit Theory, ML

Project-Code	2025-P038
Faculty-in-charge	Prof. Chandrashekar Ramanathan
Lab/Center Name	CTRI
Project title	RASP - Testing
Brief project description	Platform Code Coverage Testcases Frontend automated testing Mobile App testing
Skills / Competencies	Java SpringBoot Testing frameworks and tools