



CSIR-Central Mechanical Engineering Research Institute (CMERI) Durgapur-713209, West Bengal



Science and Engineering Research Board (SERB)
Department of Science and Technology (DST)
Govt. of India



Call for Summer Research Internship Under Accelerate Vigyan - Vritika

Title: "Training and Skill Internship on Internet-of-Thing (IoT) & Artificial Intelligence (AI) and Its Applications"

CSIR-CMERI

CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur (<https://www.cmeri.res.in/>) is a constituent laboratory of the CSIR (The Council of Scientific & Industrial Research (CSIR), known for its cutting-edge R&D knowledgebase in diverse S&T areas, is a contemporary R&D organization.) The Institute was established in the year 1958, having R&D expertise in different areas of mechanical engineering and allied fields like IoT, Robotics, Artificial Intelligence, etc. The Institute has also been contributing to developing human skills and academic environments by conducting different training programs. In addition to this, the Institute offers M Tech, IIDP and PhD programmes, in Engineering and Chemical Sciences which are the parts of Interdisciplinary Product Design, Mathematics, Physics and Chemistry, Mechanical, Electrical, Electronics, Mechatronics and Computer Science etc. CSIR-CMERI has also been provided different customized courses and training programs as per the industry requirement where the students can get exposure to the R&D working environment. Therefore, the skilled manpower/students can find a suitable working atmosphere in the industry.

VRITIKA (Training and Skill Internship)

'VRITIKA' is the call for initiation and practice in science through Training and Skill Internship. This program aims to provide opportunities to promising PG students from universities and colleges to get exposure and hands-on research skill development experience. These internships will primarily be facilitated by organizations / institutions / laboratories of national importance such as IITs, IISc, IISERs, NITs, CSIR, ICAR, ICMR etc. For more details visit the following links:

<https://acceleratevigyan.gov.in/programs/abhyas/vritika> &
<http://serb.gov.in/abhyas.php>

OBJECTIVE AND SCOPE OF THIS INTERNSHIP PROGRAMME:

Internet-of-thing (IoT) & Artificial Intelligence (AI) are a widespread computing branch for building the smart devices/machines, which can be able to perform multi-functional tasks that will naturally provide the human intelligence. IoT & AI is an interdisciplinary science with multiple approaches, but advancements in machine learning and deep learning are creating a new paradigm to expand the imagination virtually in every industry. Machine learning provides an approach towards generating computer data, which will be used along side statistical techniques to facilitate it "learn" the way to get increasingly improved tasks for particular applications. The target of this training and skill internship is to provide training of PG level students with the guidelines to explore the world of IoT & AI and its applications in their subject domains where the participants will gain knowledge of AI approaches/methods for solving the complex problems related to different computational fields and IoT provides data communications of different systems which can be monitored and accessed. The aim of this training and internship on "Internet-of-Thing (IoT) & Artificial Intelligence (AI) and its Applications" is to provide the knowledge about the newest technologies of IoT and AI in various areas like smart manufacturing, automation, robotics, precision agriculture, environmental monitoring, etc. This program would help participants (Specially PG Scholars) with the IoT & AI techniques to explore the world in their research/application domain. The participants would also learn different approaches/methods for developing smart devices/machines in various fields.

WHO CAN APPLY:

- ❖ Regular PG levels (MTech/M.E./M.S.)/PH.D students pursuing their degree from University/Institution within India.
- ❖ Specialization – Mechatronics/Robotics/Mechanical /Electrical/Electronics/Computer Science Engineering
- ❖ Very good mathematical and analytical skills
- ❖ Software knowledge like MathLab, C++, Python etc

HOW TO APPLY & SELECTION PROCESS:

- Candidate shall apply for the Internship program by filling the following Google form:
<https://forms.gle/IPDzBV7DC6mksCh48>
- Selection will be based on Academic performance and projects completed in the domain.

DETAILS OF INTERNSHIP:

- Duration – 15th November-14th December 2022 (One month)
- Domain of Internship : Artificial Intelligence (AI) and its usage
- Number of Interns Required : 05 Nos
- Mode of Training and Skill Internship: Physically
- Last Date for Submission of Application: 24th October 2022
- List of selected students shall be announced by 28th October 2022
- Confirmation of Acceptance of Internship by the selected candidates: 4th November 2022
- Reporting date for confirmed Candidates: 15th November 2022
- **Venue: CSIR-Central Mechanical Engineering Research Institute, M.G. Avenue, Durgapur-713209.**
- No stipend will be provided for the internship.
- TA, Boarding and lodging expenses for the internship period will be provided as per Vritika Scheme of SERB, DST
- Certificate will be provided to the interns after the successful completion of the internship tenure.

EVENT ORGANIZER:

Dr. Ravi Kant Jain, Senior Principal Scientist, Head ESD (Institute) and Professor, AcSIR, Information Technology
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