

IITI DRISHTI CPS FOUNDATION
(A Section 8 - Not for Profit Company)

Advt. No. – IITI-DRISHTI-CPS/Sec-8/2024/01

Date: 10 Jan, 2024

IITI DRISHTI CPS Foundation (DRISHTI CPS) was established at IIT Indore as a Technology Innovation Hub (TIH) for System Simulation, Modeling, and Visualization under the aegis of the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS). The hub is being supported by the Department of Science & Technology, Government of India. More details about the company are available at: <http://drishticps.iiti.ac.in/>

Position: Jr./ Sr./ Technical Officer

Roles and Responsibilities

- Conducting research in Cyber-Physical Systems (CPS) with a focus on practical applications and technological advancements.
- Analyzing processes in domains of Healthcare/Smart Manufacturing/ Agriculture/Education/Technologies for Smart Cities for improvement and optimization using digitalization and digital twin technologies.
- Designing and implementing models for simulating settings
- Developing data collection and integration strategies for accuracy
- Providing technical guidance on digital twin implementation in respective domain
- Analyzing data from digital twin models to improve processes.
- Staying updated on digitization and digital twin trends for project integration.

Project Management: Leading and managing research projects, which could involve coordinating with cross-functional teams, setting project timelines, ensuring deliverables are met, and reporting progress to higher management or funders. Collaborating with cross-functional teams to ensure proper integration of digital twin technologies into existing healthcare systems and processes.

Collaboration and Partnership: Collaborating with external organizations, such as industry stakeholders, research institutions, and government agencies, to develop partnerships, secure funding, and leverage expertise for collaborative research projects. Collaborating with researchers and stakeholders to identify opportunities for the application of digitization and digital twin technologies in Healthcare/Smart Manufacturing/ Agriculture/Education/Technologies systems.

Technical Expertise: Providing technical guidance and support to junior researchers and team members, imparting domain knowledge, and staying up-to-date with the latest advancements in CPS and related fields to guide research activities.

Grant Writing and Funding: Identifying funding opportunities, preparing grant proposals, and securing funding for research projects through grants, industry partnerships, or government-funded programs.

Publication and Dissemination: Contributing to the publication of research papers, patents, and technical reports that showcase the achievements and findings of the research projects. Also, presenting research outcomes at conferences, workshops, and seminars to disseminate knowledge and build networks.

Mentorship and Training: Mentoring and guiding junior researchers, interns, or project staff by providing technical expertise, career advice, and helping develop their research skills.

Compliance and Ethics: Ensuring compliance with ethical standards, regulatory requirements, and data protection measures in all research activities.

Documentation and Reporting: Documenting research methodologies, results, and findings, preparing progress reports, and maintaining accurate records for future reference or audits.

Knowledge Exchange: Engaging in knowledge exchange activities such as organizing workshops, training programs, or industry-academia interactions to disseminate research outcomes and build collaborations.

Qualifications and Experience:

- Bachelor's or Master's or Ph.D. in a relevant field (e.g., Computer Science, Electrical Engineering, Biomedical Engineering).
- Proven experience is mandatory in leading and managing technical projects, preferably in healthcare and CPS.
- Strong background in system simulation, modelling, and visualization.
- Knowledge of healthcare systems, medical devices, and data interoperability.
- Proficiency in programming languages and simulation tools commonly used in CPS research.
- Excellent communication and interpersonal skills.

Position: Full Stack Developer

We are looking for a 'Full Stack Developer' who can create dynamic web applications as well as web interfaces. The candidate should have some experience building products across the stack and a firm understanding of web frameworks, APIs, databases, and multiple back-end languages. Primarily, the candidate will also be responsible for creating and integrating the front-end elements for the application; therefore, good understanding of front-end technologies is necessary as well.

Roles and Responsibilities

- Participate in all aspects of agile software development, including design, implementation, and deployment
- Architect and provide guidance on building end-to-end systems optimized for speed and scale
- Develop responsive and visually appealing web applications using HTML, CSS and JavaScript
- Ensure cross-browser compatibility and optimize application performance

- Work with backend frameworks such as Node.js, Django, or Flask to create scalable and efficient server-side applications
- Engage with designers and front-end engineers
- Collaborate across different projects via GitHub

Skills

- Experience in building web applications
- Experience in designing and integrating RESTful APIs
- Experience in HTML, CSS, JavaScript, React, Angular, Bootstrap, Node, MySQL and MongoDB
- Experience in web deployments using Apache, Nginx etc.
- Experience in unit, integration testing
- Knowledge about web deployments over cloud such as AWS, Azure
- Knowledge about containers/Kubernetes/Docker

Qualification: Bachelor's/Master's with relevant experience or Ph.D. specifically in a relevant field such as computer science, biotechnology, bioinformatics, electrical engineering, electronics and telecommunication or a related discipline.

Position: Embedded Systems Engineer

Roles and Responsibilities

- Designing and building end-to-end IoT applications for Connected equipment.
- Programming languages (C, Embedded C, C++, Assembly language, PLC, Python)
- IoT Protocols (OPC UA, MQTT, Modbus (RTU/TCP), CoAP, AMQP)
- Controllers (PIC, ARM, Atmel, Atmega, RPi, STM32 and other upcoming microcontrollers)
- Communications Protocols (SPI, I2C, UART, RS232, CAN basic, GSM & GPS, Bluetooth, ADC, PWM Wi-Fi)
- AWS Cloud/Other
- PCB Design

Qualification: Bachelor's/Master's with relevant experience or Ph.D. specifically in a relevant field such as computer science, biotechnology, bioinformatics, electrical engineering, or a related discipline.

Compensation: As per industry standards.

Interested candidates may [click here](#) to submit the application.

Note: Only shortlisted candidates will be called for a written test/interaction/interview. Mere fulfilment of the eligibility criteria does not entitle an applicant to be shortlisted. All the applications will be thoroughly evaluated for suitability with the company's requirements. The company reserves the right to not fill up /cancel the post advertised without assigning any reason. In case of selection the role will be finalized by the selection panel and the decision will be binding. The position is contractual, full time in nature and subject to periodic performance reviews.