NAMTECH | Job Description | Lab Assistant |Advanced Data & AI Lab

Centre of Advanced Computing & AI | Ahmedabad, Gujarat

New Age Makers' Institute of Technology (NAMTECH)

1. Position Overview

NAMTECH invites applications from technically competent and proactive candidates for the position of Lab Assistant – Advanced Data & AI Lab.

The selected candidate will support the day-to-day operations, maintenance and effective functioning of the Advanced Data & AI Laboratory. The role requires sound knowledge of computer hardware, operating systems, software installation, troubleshooting and laboratory infrastructure, along with a basic understanding of Artificial Intelligence, Machine Learning, Deep Learning, Data Analytics and related technologies.

The incumbent will be responsible for maintaining laboratory computers and peripherals, supporting faculty and students during practical sessions, assisting with software installation and AI development environment setup, and ensuring the availability, reliability and efficient utilisation of laboratory resources.

2. Roles and Responsibilities

A. Computer Hardware and Infrastructure Management

- Install, configure, maintain and troubleshoot desktop computers, workstations, monitors, peripherals and networking equipment.
- Perform basic hardware diagnostics, RAM and SSD upgrades, component replacement and preventive maintenance.
- Monitor system performance, storage utilisation, network connectivity and hardware health.
- Maintain an inventory of computers, peripherals, accessories and laboratory equipment.
- Coordinate with the IT team and external vendors for repairs, warranty claims and hardware upgrades.

B. Software Installation and Technical Support

- Install and configure Windows/Linux operating systems, device drivers, utilities and required software.
- Support installation and configuration of Python, Jupyter Notebook, Anaconda, VS Code, SQL tools, database software and relevant AI/ML libraries.
- Assist in setting up development environments for Machine Learning, Deep Learning, Computer Vision, NLP and Generative AI practical sessions.
- Support GPU-enabled workstations, including basic monitoring of GPU availability, memory utilisation and software compatibility.
- Maintain software versions, installation records, system images and configuration documentation.
- Assist with user accounts, access permissions, data backups, antivirus, system updates and basic cybersecurity practices.

C. AI and Data Analytics Laboratory Support

- Demonstrate a basic understanding of AI, Machine Learning, Deep Learning, Data Analytics, Computer Vision, NLP and Generative AI concepts.
- Assist faculty in preparing laboratory environments, datasets, software packages and demonstration systems for practical sessions.
- Help students resolve common technical issues related to Python programming, notebooks, libraries, database connectivity and model execution.
- Support the execution of AI/ML programmes and troubleshoot basic dependency, memory and GPU-related errors.
- Assist in preparing environments for SQL, Big Data Analytics, Computer Vision, NLP, RAG and MLOps exercises under faculty guidance.
- Support demonstrations and student project work involving AI applications, referring complex algorithmic and research-related queries to the concerned faculty.

D. Laboratory Operations and Student Support

- Ensure laboratory systems are functional and ready before scheduled classes, workshops, examinations and project sessions.
- Provide first-level technical assistance to faculty and students during laboratory sessions.
- Maintain laboratory usage registers, issue logs, maintenance records and hardware/software failure reports.
- Ensure adherence to laboratory protocols, responsible computing practices and data security guidelines.
- Coordinate laboratory bookings, equipment allocation and availability of required resources for academic activities.

E. Documentation and Resource Optimisation

- Maintain updated inventories of hardware, software, licences and consumables.
- Prepare periodic reports on system availability, maintenance activities, faults and resource utilisation.
- Track recurring hardware/software issues and recommend corrective and preventive measures.
- Assist in identifying resource requirements for upcoming courses, AI projects, workshops and industry engagements.
- Support efficient utilisation of computing resources and responsible use of GPU-enabled systems.

3. Essential Qualifications and Experience

Educational Qualifications

- Diploma or Bachelor's degree in Computer Science, Information Technology, Computer Engineering, Electronics or a related technical discipline.
- Relevant hands-on experience in computer hardware maintenance, laboratory management and IT support will be preferred.

Technical Skills

- Practical knowledge of desktop/workstation assembly, hardware troubleshooting, RAM, SSDs, processors and peripherals.
- Knowledge of Windows and basic Linux administration.
- Familiarity with LAN connectivity, IP configuration, printers and basic networking.
- Basic knowledge of Python, Jupyter Notebook, SQL and AI/ML development environments.
- Awareness of GPU computing and installation of AI/ML libraries.
- Familiarity with data backup, cybersecurity, software licensing and system maintenance.

4. Desirable Qualifications and Skills

- Experience in supporting computer laboratories in educational institutions, engineering colleges or R&D facilities.
- Familiarity with NVIDIA GPUs, CUDA compatibility and GPU monitoring tools.
- Basic knowledge of Docker, virtual machines, remote access and cloud-based computing environments.
- Awareness of Large Language Models (LLMs), Generative AI, Computer Vision and MLOps concepts.
- Strong troubleshooting, documentation, communication and student-support skills.

5. Key Competencies

- Hands-on technical and problem-solving abilities.
- Ability to provide timely technical assistance to faculty and students.
- Strong organisational and laboratory management skills.
- Attention to detail in equipment maintenance and documentation.
- Ability to work collaboratively with faculty, IT teams and other institutional stakeholders.
- Willingness to learn and adapt to emerging AI and computing technologies.

6. Application Process

Interested candidates are invited to share their updated CV, highlighting their educational qualifications, relevant technical experience, hardware/software expertise and laboratory support experience.

Application Email: dhara.shah@namtech.ac

Email Subject: Application – Lab Assistant – Advanced Data & AI Lab – NAMTECH

Only shortlisted candidates will be contacted for further selection processes.