Job Notification Form, IIT Delhi

Company Overview

Name: MIKO

Website: https://in.miko.ai/

Company Type: Core (Technical)

Description: Miko is an advanced consumer robotics innovation lab focused with the mission of bringing Robotics and
AI to every consumer home. Founded by young and dynamic entrepreneurs from IIT Bombay, Miko is a
global deep tech company with offices in US, UK and India, and customer base across 140+ countries.
Focused on taking Robotics and AI to every consumer home, Miko is the first of its kind "content on
subscription" hardware platform for kids powered by patented technology.
Our latest flagship product, Miko 3 (www.miko.ai), is a playful learning robot that engages, educates, and
entertains kids. Launched simultaneously across the US, UK, India and the UAE in 2021, Miko 3 is a unique
offering that focuses on learning and development of the child through self-initiated contextual topics
with children to enable conversational learning. It hosts a powerful marketplace for third party content
partners to plug their content and connect with Miko users on subscription.
Miko 3 is powered by a proprietary emotional intelligence and adaptive personality engine, complex
conversational and multilingual AI framework, edge and hybrid speech & vision recognition along with an
active learning and behavioural analysis engine. All of this is built over an autonomous navigation system,
which enables Miko to offer a range of benefits for the user.
The Miko team is an interdisciplinary group consisting of individuals from electronics, embedded systems,
mechanical, industrial, robotics and AI engineering domains, Human Robot Interface designers, UI/UX
designers, mobile and cloud software engineers, content creators, artists, mathematicians,
neuropsychologists, marketing and sales mavericks, Customer support professionals and knowledge
partners.

Job Details

Designation: Jr AI Image

Type: Core (Technical)

Place of Posting: Mumbai/ Remote

Job Details: Summary:

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The Role:

We are looking for an experienced AI Image processing lead engineer in the team. In this role, you will be leading the efforts in the research, design, development and optimization of state-of-the-art vision & image processing algorithms and models for creating a robust user experience on Miko series of robots. We expect you to have strong coding, mathematical, signal processing and implementation skills with expertise in python deep learning frameworks.

Work Experience & Qualifications:

No restrictions on degree/qualifications; only skills matter.

CTC:

8 LPA (Fixed) + 4 LPA (Performance bonus) + 4 LPA (Patent incentive bonus)

Responsibilities:

• Spearhead the developmental efforts in the Vision domain such as improvisation of existing robotics stack, design new features and develop state of the art algorithms such as multi-user recognition, facial emotion analysis, generic object detection, scene classification/summarization/remembrance and others.

• Supervise and develop production ready edge and cloud frameworks for applied AI algorithms including end-to-end facial analysis, person identification, scene understanding and reconstruction, gesture & activity recognition.

• Design, implement and optimize large scale data processing and continuous training pipelines for various vision tasks on a single/distributed GPU system to accelerate model training development cycles.

• Consistent coordination and collaboration with the AI backend, Robotics and QA team for efficient development cycles and testing for new features and improvements.

• Ensuring timely releases, maintenance and scaling of services in the production environment.

Requirements & Skills:

• Excellent understanding and familiarity with the Pytorch/Tensorflow framework.

• Experience with Visual GANs and techniques for synthetic image generation, augmentation, Summarization and enhancements.

• Strong understanding of fundamentals of image pre-processing such as normalization, histogram equalization, scaling/interpolation, geometric transformations, color/exposure correction, contrast adjustment, deblurring and denoising.

• Proficiency in camera calibration and frame of reference transformations.

• Experience with image processing techniques and models such as segmentation, face/person detection, face recognition/person re-identification, tracking and object detection.

• Experience with facial landmark extraction and head pose estimation algorithms.

- Proficiency with distributed training and inference techniques in Pytorch.
- Thorough understanding of model compression/optimization/quantization techniques for faster inference on edge/embedded devices as well as cloud GPUs.
- Excellent understanding of lower level fundamentals of deep learning models such as layer details, attention, normalization, backpropagation, and optimizers.
- Experience in transfer learning and fine-tuning of deep learning models as well as designing architectures from scratch.
- Strong understanding of CPU-GPU transfers, CUDA usage, GPU architectures, concepts of pipelining and multiprocessing as well as latency/throughput bottlenecks during training of neural networks.
- Ability to read and implement related academic papers in the image processing domain.
- Proficiency in data science/image processing libraries/frameworks such as OpenCV, Sklearn, Numpy, Scipy.
- Proficiency with Vision Transformers architecture is a plus.
- Experience in deployment of vision models at scale on a GPU enabled system using one of the following frameworks: Torchserve, TfServing, Triton, KFServing, BentoML.
- Proficiency with Linux OS and basic bash scripting.

Joining By: 1 June 2023

Salary Details

CTC:	800,000 INR Per Annum
Gross:	800,000 INR Per Annum
Base Salary:	800,000 INR Per Annum
Joining Bonus:	0 INR Per Annum
HRA:	0 (min) -0 (max) INR Per Annum
Medical Allowance:	0 (min) -0 (max) INR Per Annum
Other cash benefits part of gross:	0 (min) -0 (max) INR Per Annum
RSUs:	0 INR Per Annum
ESOPs:	0 INR Per Annum
Performance/other bonuses:	0 (min) -400,000 (max) INR Per Annum
Other cash benefits part of CTC:	0 (min) -400,000 (max) INR Per Annum
Other Cash Benefits:	Patent Incentives

Selection Process

Resume Shortlist:	Yes
Written Test:	Yes

Online Test:	Yes
Group Discussion:	Yes
Medical Test:	No
Personal Interview:	Yes
No. of Rounds:	4
No. of Offers:	5

Eligibility

Recruiting PHDs:	Yes
Eligible Departments:	B.Tech in Biochemical Engineering & Biotechnology, B.Tech in Chemical Engineering, B.Tech in Civil Engineering, B.Tech in Computer Science & Engineering, B.Tech in Electrical Engineering, B.Tech in Electrical Engineering (Power and Automation), B.Tech in Engineering Physics, B.Tech in Engineering and Computational Mechanics, B.Tech in Mathematics & Computing, B.Tech in Mechanical Engineering, B.Tech in Production & Industrial Engineering, B.Tech in Textile Engineering, B.Tech and M.Tech in Biochemical Engg & Biotechnology, B.Tech and M.Tech in Chemical Engineering, B.Tech and M.Tech in Computer Science & Engineering, B.Tech and M.Tech in Mathematics & Computing, M.Tech in Applied Optics, M.Tech in Atmospheric-Oceanic Science and Technology, M.Tech in Biomedical Engineering, M.Tech in Chemical Engineering, M.Tech in Communications Engineering, M.Tech in Computer Science & Engineering, M.Tech in Computer Technology, M.Tech in Construction Engineering & Management, M.Tech in Control & Automation, M.Tech in Cyber Security, M.Tech in Electric Mobility, M.Tech in Energy & Environment Technologies and Management, M.Tech in Energy Studies, M.Tech in Engineering Analysis & Design, M.Tech in Environmental Engineering & Management, M.Tech in Fibre Science & Technology, M.Tech in Geotechnical and Geoenvironmental Engineering, M.Tech in Industrial Engineering, M.Tech in Instrument Technology, M.Tech in Integrated Electronics & Circuits, M.Tech in Materials Engineering, M.Tech in Mechanical Design, M.Tech in Molecular Engineering: Chemical Synthesis & Analysis, M.Tech in Optoelectronics & Optical Communication, M.Tech in Polymer Science and Technology, M.Tech in Power Electronics, Electrical Machines & Drives, M.Tech in Power Systems, M.Tech in Production Engineering, M.Tech in Radio Frequency Design & Technology, M.Tech in Rock Engineering & Underground Structures, M.Tech in Solid State Materials, M.Tech in Structural Engineering, M.Tech in Telecommunication Technology & Management, M.Tech in Textile Chemical Processing, M.Tech in Textile Engineering, M.Tech in Thermal Engineering, M.Tech in Transportation Engineering, M.Tech in VLSI Design Tools & Technology, M.Tech in Water Resources Engineering, M.Sc in Chemistry, M.Sc in Cognitive Science, M.Sc in Economics, M.Sc in Mathematics, M.Sc in Physics, M.S.(R) in Machine Intelligence & Data Science, M.S.(R) in Applied Mechanics, M.S.(R) in Biochemical Engineering and Biotechnology, M.S.(R) in Biological Sciences, M.S.(R) in Telecommunication Technology and Management, B.Tech in Civil Engineering and M.Tech in Geotechnical and Geoenvironmental Engineering, B.Tech in Civil Engineering and M.Tech in Water Resources Engineering, B.Tech in Civil Engineering and M.Tech in Structural Engineering, B.Tech in Civil Engineering and M.Tech in Construction Engineering & Management, M.S.(R) in Civil Engineering, M.S.(R) in Chemical Engineering

& Management, M.S.(R) in Civil Engineering, M.S.(R) in Chemical Engineering, B.Tech in Textile Engineering and M.Tech in Computer Science & Engineering, M.S.(R) in Computer Science & Engineering, Master of Design in Industrial Design, M.S.(R) in Electrical Engineering, M.S.(R) in Energy Science and Engineering, M.S.(R) in Sensors, Instrumentation and Cyber-physical System Engineering, M.S.(R) in VLSI Design Tools and Technology, B.Tech in Mechanical Engineering and M.Tech in Thermal Engineering, B.Tech in Mechanical Engineering and M.Tech in Computer Science & Engineering, M.S.(R) in Mechanical Engineering, M.S.(R) in Materials Science and Engineering, Post Graduate Diploma for Visionary Leadership in Manufacturing, Masters in Public Policy, M.S.(R) in Information Technology