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 Audio

Type: Core (Technical)

Place of Posting: Mumbai/ Remote

Job Details: The Role

We are looking for an experienced AI Speech and Audio 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 speech and audio processing algorithms and models for creating a robust voice and conversational 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 Audio and Speech domain such as improvisation of existing voice stack, design new features and develop state of the art algorithms for wake word detection, sound signature identification, speaker recognition and diarization, text to speech generation and others.
• Supervise and develop production ready frameworks for applied AI algorithms in diverse applications such as Neural TTS, small and large scale speech recognition system, voice training and identification, general audio classification and others.
• Design, implement and optimize large scale data processing and continuous training pipelines for various audio tasks on a single/distributed GPU system to accelerate model training development cycles.
• Consistent coordination and collaboration with the AI backend, Robotics, Linguistics 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.
• Proficiency with Transformers architecture based models.
• Working knowledge of Audio GAN & Vocoder models for Neural TTS.
• Experience with Speaker encoder/embedding extraction models.
• Experience with one of the following modules: Voice activity detection with noise analysis / Wake Word detection with False Acceptance/False Rejection analysis.
• Strong understanding of audio feature extraction techniques and underlying principles such as MFCC, LPCC, LFBE, STFT, DCT, DWT and others.
• Experience with Acoustic and Language models for speech recognition systems.
• 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 audio/speech domain.
• Proficiency in machine learning/audio preprocessing libraries/frameworks such as Librosa, sklearn, python speech features.
• Experience in deployment of audio models at scale on a GPU enabled system using one of the following frameworks: Torchserve, TfServing, Triton, KFServing, BentoML.
• Experience in noise augmentation and mixing techniques.
• 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 Incentive

Selection Process

Resume Shortlist:	Yes
Written Test:	Yes
Online Test:	Yes
Group Discussion:	Yes
Medical Test:	No
Personal Interview:	Yes
No. of Rounds:	3
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, 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