Job Notification Form, IIT Delhi

Company Overview

Name: Honda R&D Co., Ltd.

Website: http://www.honda.co.jp/RandD/

Company Type: MNC (Foreign Origin)

Description: NA

Job Details

Designation: Computer/Robot Vision Engineer

Type: Information Technology

Place of Posting: Wako, Saitama, Japan

Job Details: Honda R&D Innovative Research Excellence is committed to pursuing innovative development and creation of "value" in life and mobility. The department includes "Frontier Robotics" domain and the mission of the domain is to make a new epoch by research and development of "Robot" and "New Device using robotics technology" that will be useful to everyday life.

Toward our Frontier Robotics mission, you will work on human and context understanding by applying your skill and knowledge on computer/robot vision. You must have strong will to achieve goals with hypothetical thinking and comprehensive skills to work as a team. You should proactively take actions, interacting with stakeholders and identifying issues and possible solutions in order to maximize your personal as well as organizational output. You are also expected to expand your work to other technical domains for broader achievements.

Responsibilities
-Find issues relevant to realizing a valuable, vision-aided robot use case and break them down into concrete problems by trying existing methods.
-Propose a solution in state-of-the-art vision technologies with concrete achievement criteria.
-Develop a solution system including design, data collection, programming, testing and analysis of the results.
-Show in a real environment that the developed system functions according to the use case.
-Work closely with robotics and software engineering teams to develop systems from concept to production level.
-Collaborate with external researchers and companies.

Specific Goals
The candidate will research AI technologies working on real robots by using his/her experienced knowledge and skills. Honda expects the candidate to create novel image recognition algorithms with using machine learning techniques for robot navigation and manipulation. The image recognition includes human detection/tracking, object detection, semantic segmentation, 3D pose estimation and so on.
The images of research schedule and deliverables are as follows.

Phase1: Understanding robot vision: The candidate will join a team and learn the difficulties of robot vision. This means the candidate understands how difficult it is to process images captured from a moving camera on a robot.
Period: 1st year
Deliverables: Understanding essential problems of robot vision in team activity.
Collecting image data from real robot and applying DL algorithms to collected data
Making a benchmark list with using conventional DL algorithms
Complete the report of essential problems of robot vision

Phase2: Joining a real robot project: The candidate will join a real robot project in which HONDA will try to create a robot product. The candidate will develop new algorithm for robust scene understanding from robot eye images.
Period: 2nd to 3rd year
Deliverables: Discussing about the possibility of scene understanding for robots with team members
Collecting annotation data with using a real moving robot
Developing brand new algorithm for object detection, human detection/tracking, semantic segmentation, etc. depending on robot service
Writing report about the developed algorithm
Writing patent and/or paper about the algorithm

Other Skills and Experience
-Excellent communication and teamwork skills
-Experience in applying machine learning and image processing to real-world robotic problems
-Excellent prototyping skill and expert programming skills in multiple programming languages

Minimum Requirements:
The candidate should have program language skills of "C", "C++" and/or "Python", and have more than one basic experience in machine learning technologies and computer vision technologies.

International: Yes

Joining By: October 1

Salary Details

CTC: 8200000 JPY Per Annum

Gross: 7200000 JPY Per Annum

CTC Breakup: Base + House Rent + Healthcare + Allowance (food & commute) + Japanese Training

Perks / Bonus: We follow a concept of 'supreme bonus':
After every 6 months of evaluation:
1. Output meets the assignments: no incentive (CTC: JPY 8200000)
2. Outstanding outputs: additional bonus of JPY 560000 (CTC: JPY 8200000+560000)
3. Supreme outputs: additional bonus of JPY 1120000 (CTC: JPY 8200000+1120000)
So maximum CTC a candidate can get after 1 year depending upon his performance is JPY 8200000+ 1120000+ 1120000 = JPY 10740000

Selection Process

Resume Shortlist:	Yes
Written Test:	No
Online Test:	Yes
Group Discussion:	No
Medical Test:	No
Personal Interview:	Yes
No. of Rounds:	2
No. of Offers:	1
Minimum CGPA:	

Eligibility

Recruiting PHDs:	Yes
Eligible Departments:	B.Tech in Biochemical Engineering & Biotechnology, B.Tech in Civil Engineering, B.Tech in Chemical Engineering, B.Tech in Computer Science & Engineering, B.Tech in Electrical Engineering, B.Tech in Electrical Engineering (Power and Automation), B.Tech in Mechanical Engineering, B.Tech in Production & Industrial Engineering, B.Tech in Mathematics & Computing, B.Tech in Engineering Physics, 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, B.Tech in Production & Industrial Engineering and M.Tech in Production Engineering, B.Tech in Mechanical Engineering and M.Tech in Mechanical Design, B.Tech in Mechanical Engineering and M.Tech in Applied Mechanics, B.Tech in Production & Industrial Engineering and M.Tech in Mechanical Design, B.Tech in Textile Engineering and M.Tech in Computer Science & Engineering, B.Tech in Chemical Engineering and M.Tech in Computer Science & Engineering, B.Tech in Production & Industrial Engineering and M.Tech in Computer Science & Engineering, B.Tech in Civil Engineering and M.Tech in Structural Engineering, B.Tech in Civil Engineering and M.Tech in Construction Engineering & Management, B.Tech in Engineering Physics and M.Tech in Computer Science & Engineering, B.Tech in Mechanical Engineering and M.Tech in Thermal Engineering, B.Tech in Mechanical Engineering and M.Tech in Computer Science & Engineering, M.Tech in Chemical Engineering, M.Tech in Molecular Engineering: Chemical Synthesis & Analysis, M.Tech in Geotechnical and Geoenvironmental Engineering, M.Tech in Rock Engineering & Underground Structures, M.Tech in Structure Engineering, M.Tech in Water Resources Engineering, M.Tech in Construction Engineering & Management, M.Tech in Environmental Engineering & Management, M.Tech in Transportation Engineering, M.Tech in Computer Science & Engineering, M.Tech in Applied Optics, M.Tech in Solid State Materials, M.Tech in Fibre Science & Technology, M.Tech in Textile Engineering, M.Tech in Textile Chemical Processing, M.Tech in Atmospheric-Oceanic Science and Technology, M.Tech in Biomedical Engineering, Master of Design in Industrial Design, M.Tech in Communications Engineering, M.Tech in Computer Technology, M.Tech in Control & Automation, M.Tech in Integrated Electronics & Circuits, M.Tech in Power Electronics, Electrical Machines & Drives, M.Tech in Power Systems, M.Tech in Radio

Frequency Design & Technology, M.Tech in Mechanical Design, M.Tech in Industrial Engineering, M.Tech in Production Engineering, M.Tech in Thermal Engineering, M.Tech in Engineering Analysis & Design, M.Tech in Industrial Tribology & Maintenance Engineering, M.Tech in Energy Studies, M.Tech in Instrument Technology, M.Tech in Optoelectronics & Optical Communication, M.Tech in Polymer Science & Technology, M.Tech in Telecommunication Technology & Management, M.Tech in VLSI Design Tools & Technology, M.S.(R) in Biochemical Engineering and Biotechnology, M.S.(R) in Chemical Engineering, M.S.(R) in Civil Engineering, M.S.(R) in Computer Science & Engineering, M.S.(R) in Telecommunication Technology and Management, M.S.(R) in Information Technology, M.S.(R) in Biological Sciences, M.S.(R) in Applied Mechanics, M.S.(R) in Mechanical Engineering, M.S.(R) in Electrical Engineering, M.Sc in Chemistry, M.Sc in Mathematics, M.Sc in Physics, Doctor of Philosophy