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: Autonomous Drive Engineer (Algorithm Design Researcher)

Type: Information Technology

Place of Posting: Roppongi, Tokyo, Japan

Job Details: Honda is researching and developing the technologies realizing an automated driving system for a personal car. The system provides "freedom of door-to-door movement" by switching automated driving level from Level-2 to Level-3 based on driving environment. The system can make user's life happier and more valuable than a limited-area Level-4 system relying on high-definition map. In order to realize the system, the AI technologies that can understand driving scene, predict future movements of traffic participants (pedestrians and other vehicles), cooperative action planning and human-machine communication interface will be needed.

The candidate will research one or two of aforementioned AI technologies by using his/her experienced knowledge and skills. Honda expects the candidate to create novel algorithms for them on the basis of a scene-graph algorithm, a social LSTM (Long short-term memory), a hybrid approach between DNN and model-based algorithm, etc. The images of research schedule and deliverables are as follows.

Phase1: Feasibility study of algorithm for limited driving scene. The candidate will research not only AI algorithm and making its program but also suitable data collection and analysis methods.
Period: First year.
Deliverables: AI model (Trained DNN) and AI training program of Phase1 (the feasibility study).
Report of Phase1 (objective, concept, methodology, performance requirement, criteria and methods for performance and validation tests, results of performance and validation tests, etc.) .
Usage manual for the AI model and the AI training program.
Documents about data collection and annotation methods for AI training.
Documents explain the reasons why target driving scenes are chosen for this research.

Phase2: The candidate will generalize his/her proposed algorithm for wider driving scenes, and demonstrate it on a testing vehicle on public road.
Period: Second to third year.
Deliverables: AI model (Trained DNN) and AI training program for Phase 2.
Program which enables to execution of the AI model on an actual vehicle.

Program which enables to execution of the AI model on an actual vehicle.
Report of Phase2 (objective, concept, methodology, performance requirement, criteria and methods for performance and validation tests, results of performance and validation tests, etc.)
Usage manual for the AI model, the AI training program and the program for the vehicle test.
Documents explaining the theories and program of the AI model, the AI training program and the program for the vehicle test.
Documents showing software and hardware requirements to execute the AI model on the actual vehicle
Documents about data collection and annotation methods for AI training
Documents explain the reasons why driving scenes for validation tests are chosen and why validation test criteria and methods are chosen for Phase 2.

Minimum Requirements:
The candidate should have program language skills of "C", "C++" and/or "Python", basic experience of DNN (Deep Neural Network) technologies, computer vision technologies, model-based control theories and/or optimization theories and use skill of Linax. Moreover, if the candidate has the additional skills of MATLAB/Simulink and automotive technologies, Honda welcomes them.

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