



Department of Computer Science and Engineering, 5th Floor, R&D Block, IIIT Delhi, India

Job Description

Job Title	IIITD-JPMC Postdoctoral Research Assistant
Department	Computer Science and Engineering
Centre	Infosys Centre for AI
Salary	₹80K-100K per month.
Hours	Full Time
Contract Type	Fixed Term: 1 Year from start date
Contact	<ol style="list-style-type: none"> 1. General Queries: Priti Patwal [prtip@iiitd.ac.in] 2. Technical: Dr. Vinayak Abrol [abrol@iiitd.ac.in]
Reporting To	Dr. Vinayak Abrol
Additional Information	<ul style="list-style-type: none"> • This position can't be held concurrently with any other substantive post without prior permission from the Head of Department. • This position is subject to a 6 months probation period. • Applicants are responsible for ensuring that reference letters from the referees are received by closing date. <p>This position is funded by JPMorgan Chase & Co. Faculty Research Award and the generated IP will be governed by the award agreement.</p>

About CSE Department, IIIT Delhi

CSE department at IIITD is a world class department advancing research and development in various areas of computer science as well as the application of computer and software technologies in different domain areas. Currently, the department ranks 7th (India), 401-450 (World) as per THE World University Rankings (Computer Science); 8th (India), 240th (World) as per CS Rankings; 14th (India), 451-500 (World) as per QS World University Rankings (Computer Science and Information Systems). The department trains and educates, at both undergraduate and postgraduate levels, engineers of outstanding ability who can become innovators and new product creators. It is also globally respected for its research capability with some research groups being considered as among the leaders globally and within the country. The vision of the department is to be a world class department that is socially relevant, globally linked and industry-facing.

More Details: cse.iiitd.ac.in

About Infosys Centre for Artificial Intelligence

Infosys Centre for Artificial Intelligence (CAI) was established as a strategic partnership between IIIT Delhi and Infosys Foundation (a non-profit organization). This is one of the largest endowments that industry has provided to academia for research in India. The centre focuses on research, education and technology development in areas including but not limited to Computer Vision; NLP; Robotics; Big data & graph analytics; Software engineering; Planning, scheduling & allocation, AI for social good and Healthcare informatics. CAI facilitates IIITD's B.Tech (CSAI) and M.Tech (specialization in AI) programmes which are ranked among the best in the country, and an ecosystem that attracts the best faculty from top institutions in India and abroad.

More Details: cai.iiitd.ac.in

High Performance Computing Infrastructure

CAI and CSE department provides High Performance Computing (HPC) resources, support and advice to affiliated faculty, staff and students. At the core are compute nodes with up to 64 core CPUs and latest NVIDIA P100, V100 & A100 GPUs along with a NVIDIA certified DGX system for advanced AI workloads. The above infrastructure is in addition to the ones available with the respective research labs.

Cross-Caps Lab

Cross-Caps Lab specialises in design, and analysis of numerical algorithms for information inspired applications in signal processing and machine learning. Members of the lab are associated with one of the sub-groups namely 1) Sound Cube: Inverse problems in speech and audio processing; 2) Healthcare Informatics: Building acute and critical care solutions; and 3) Information Intelligence: Developing efficient and scalable machine learning algorithms. Our research is funded by both Govt. agencies e.g., SERB and DST, and industry e.g., Google and JP Morgan. We also have various active academic collaborations from within India and abroad.

Role

ML/DL for Speech/Audio Applications

Cross-Caps Lab, Infosys Centre for AI, in joint collaboration with JP Morgan & Chase (JPMC), is inviting applications for IIITD-JPMC Postdoctoral Fellow position in the field of Machine learning or Deep Learning for acoustic and/or language modeling. The fellowship will be tenable at IIIT Delhi and will be offered for a period of 1 year in the first instance. Fellowship is expected to result in high-quality publication in a top-tier conference/journal. The selected candidate will be conferred the title '**IIITD-JPMC Postdoctoral Fellow**' for the duration of his stay at IIITD.

For general queries, reach out to abrol[at]iiitd[dot]ac[dot]in with the subject "Inquiry for IIITD-JPMC Postdoctoral Fellowship."

Benefits

- Competitive Fellowship of INR 80K - 100K per month.
- Research contingency and international travel support.
- Access to high-performance computing infrastructure.
- Networking opportunity with peers and collaborators from IIITD and JPMC AI Team in New York, USA.
- The position may be extended based on performance.

Responsibilities

- Fellows must contribute to several aspects of the research lifecycle, spanning ideation, implementation, and experimentation.
- Adapt existing and develop new research methodologies. Prepare working theories and analyse qualitative and/or quantitative data from a variety of sources, reviewing and refining theories as appropriate.
- Publish in high quality venues and present papers at conferences or public meetings.
- Act as a source of information and advice to other members of the group on methodologies or procedures.
- Represent the research group at external meetings/seminars, either with other members of the group or alone.
- Be a team player and support the team to do outstanding research. Carry out collaborative projects with colleagues in partner institutions, and with others in the team.

*This position doesn't provide any opportunity to teach in the department or institute.

Qualifications and Desirable Skills

You must hold a Ph.D. degree with CGPA > 7.5 in CSE/ECE/Mathematics or related disciplines at the time of application. Candidates who have submitted their thesis but are yet to defend it or are expected to submit it in the next two to three months are also encouraged to apply.

Your Ph.D. work should be able to demonstrate knowledge in Machine Learning, ASR, or NLP and experience with sequence-to-sequence based Deep Learning technologies (e.g., Transformers, LSTM, NMT). Proven experience in designing, implementing, and optimizing the End-to-End training & inference in any one of the speech technology areas such as language/acoustic modeling, multi-lingual/cross-language ASR, TTS, model compression & acceleration, speaker diarization, or voice separation. Experience with popular libraries and models, e.g., Kaldi, SpeechBrain, BERT, OpenAI GPT, OpenNMT, CoreNLP, NLTK, Word2vec, or GloVe. Good publication track records in conferences and journals, including, but not limited to TASLP, TNN, INTERSPEECH, ICASSP, NeurIPS, ASRU, ICLR, and ACL. A plus is a good knowledge of Python and hands-on experience with TensorFlow/PyTorch.

Application Procedure and Important Dates

Applications can be made through this Google form: https://lnkd.in/e_m9kMHU

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description. If selected, as part of your application you will be asked to provide details of two referees.

You will also be required to upload a curriculum vitae with a list of publications, a brief statement of research interests and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants). Please upload all documents as a single PDF file.

- **Applications will be evaluated constantly and filled on as soon as a suitable candidate is found.**
- **The position will start in September/October 2022 (or soon after. Quite flexible).**

Equality of Opportunity

Entry into employment with IIIT Delhi and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender, marriage or civil partnership, race, religion or sexual orientation.
