RIDDHIMAN MOULICK

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I am a software developer at Oracle, currently working as an applications developer on the Fusion Release Engineering Team. My interests lie in algorithmic problem-solving and developing efficient ML systems for CV/NLP challenges and I've been actively pursuing these interests both professionally and academically.

EDUCATION

Indian Institute of Technology, Kharagpur | ***CGPA: 9.08/10.00*** 2020 – 2024
Major: Electrical Engineering | Minor: Computer Science & Engineering | Micro: Artificial Intelligence

City International School, Pune | **Higher Secondary (CBSE)** | ***Grade: 96.8%*** 2018 – 2020

The Bishop's School, Undri, Pune | **Secondary School (ICSE)** | ***Grade: 98.4%*** 2006 – 2018

WORK EXPERIENCE

Software Developer | **Oracle IDC, Hyderabad** Jul' 2024 – Present

- Automated developer query tracking, answering, and knowledge base population using a scheduler-based auto-logger and a **RAG Agent**, leveraging **Oracle 23AI vector search** on continually growing knowledge sources.
- Designed a **visual analytics tool** to gather infrastructure insights for **load distribution** during build job allocation, so as to maintain efficiently **distributed resource allocation** across 1000+ virtual machines on the cloud.

UG Student Researcher | **CVIR & CNeRG, IIT Kharagpur** Aug' 2023 – Jun' 2024

Transferable Knowledge Systems | Prof. Abir Das, Prof. Saptarshi Ghosh (CSE, IIT Kharagpur)

- Developed an **on-the-fly prefix tuning** technique, coupled with task similarity computation using **language attributes** to significantly reduce parameter overhead and address **catastrophic forgetting** in class-incremental continual learning, which outperformed SOTA classification methods by $\sim 3\%$. (Work accepted @CVPR'24)
- Designed a **fully source-free**, actively controlled student-teacher based knowledge refinement mechanism to perform **test-time adaptation** with continually changing target domain distributions. (Under Review @CVPR'25)

Applications Developer Intern | **Oracle IDC, Hyderabad** May 2023 – Jul' 2023

- Implemented **user action recommendation** feature in *Becky*, a digital assistant, to automatically initiate a **contextual conversation** with users, and suggest actions based on their possible requirements.
- Developed a scheduler to fetch and analyze data from all running jobs and processes, to understand the prospective needs of the user, and to notify the user to take urgent actions.

PUBLICATIONS/PREPRINTS

- Convolutional Prompting meets Language Models for Continual Learning [🔗] | In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2024
  *Anurag Roy, **Riddhiman Moulick**, Vinay K. Verma, Saptarshi Ghosh, Abir Das*
- Source-Free Controlled Adaptation of Teachers for Continual Test-Time Adaptation | Under Review: In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2025

SELECTED PROJECTS

- **EquiStrat** [🔗] - Computing Dominant Strategies and Nash Equilibria in Normal Form Games
- **RLNav** [🔗] - Using Policy Evaluation/Iteration, and Monte-Carlo Algorithms for stochastic navigation

COURSEWORK

Computer Architecture and Organisation, Algorithms-I, Deep Learning Foundations and Applications, Reinforcement Learning, Algorithmic Game Theory, AI for Economics, Information Retrieval, Database Management Systems

SKILLS

- **Programming Languages**: Python, C, C++, Java, PL/SQL, JavaScript, Verilog, Assembly, LaTeX
- **Tools & Libraries**: PyTorch, Tensorflow, OpenCV, Docker/Podman, Jenkins, cURL, Git, Matlab, Stateflow

AWARDS AND ACHIEVEMENTS

- Nominated to receive the **Systems Award, 2024** for the best thesis amongst all graduating students in the department
- Awarded the **Chanakya Graduate Fellowship, 2024** by AI4ICPS, IIT Kharagpur
- Achieved an **All India Rank 6** and city rank 1 in ICSE Class X with an aggregate score of **98.4%**