

ANIRUDDHA DEB

 Aniruddha-Deb  Website  cs1200869@iitd.ac.in

EDUCATION

Indian Institute of Technology, Delhi
B.Tech in Computer Science and Engineering

Nov 2020 - Present
CGPA: 9.55/10

ACADEMIC ACHIEVEMENTS

- Awarded the **Reliance Foundation Scholarship** for the batch of 2020-24
- Awarded the **Summer Undergraduate Research Award 2022** by IIT Delhi
- Awarded the **Endowment Merit Scholarship** by the IIT Delhi Alumni Association
- Invited to Japan for a week-long research visit under the **Sakura Science Exchange Program**
- Awarded the **Semester merit prize** for being in the top 7% of students in 1st, 2nd and 3rd semester
- All India Rank of **323** out of 160,000 applicants in **JEE (Advanced) 2020**.

WORK EXPERIENCE

COL333/COL671: Introduction to Artificial Intelligence
Teaching Assistant

Fall 23-24

Optiver
Software Engineering Intern, Hardware Development Team

Summer 2023

Neuroimaging lab, IIT Delhi
Undergraduate Research Assistant

Summer 2022

PUBLICATIONS

1. Aniruddha Deb, Neeva Oza, Sarthak Singla, Dinesh Khandelwal, Dinesh Garg, Parag Singla.
Fill in the Blank: Exploring and Enhancing LLM Capabilities for Backward Reasoning in Math Word Problems. *arXiv preprint arXiv:2310.01991* (2023).

KEY COURSES TAKEN

- **Undergraduate:** Introduction to Artificial Intelligence, Probability and Stochastic Processes, Statistical Methods, Operating Systems, Parallel and Distributed Programming, Linear Algebra
- **Graduate:** Machine Learning, Deep Learning, Natural Language Processing

RESEARCH PROJECTS

LLM-based tagging for low resource languages
Advisors: Prof. Parag Singla, Prof. Mausam

Ongoing

Developing NER/POS taggers for low-resource languages using retrieval based prompts from related high-resource languages.

Applications of IS-TSA in Exploring Human Brain Functions
Advisor: Prof. Rahul Garg

Summer 2022

Summer Undergraduate Research Award 2022

Implemented tooling to compute *Inter-Subject Temporal Synchronization Analysis* scores in a memory-efficient, multithreaded manner. Also analysed results of TSAIS signals via clustering in the NKI Checkerboard and HCP Retinotopy/Working Memory datasets

TECHNICAL SKILLS

- Languages: Python, C, C++, Java, SML, OCaml, Prolog, VHDL, ARM Assembly, CUDA, R, JavaScript
- Platforms: Pytorch, OpenAI API, CUDA, HPC (PBS), Linux Kernel, Linux (Bash), Vue

SELECTED COURSE PROJECTS

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|---|--|
| 1. Visual Question Answering on CLEVRER | <i>Deep Learning, Spring 22-23</i> |
| 2. Text to SQL Generation | <i>Deep Learning, Spring 22-23</i> |
| 3. Exploring Normalization in CNNs | <i>Deep Learning, Spring 22-23</i> |
| 4. Named Entity Recognition in Medical Literature | <i>Natural Language Processing, Spring 22-23</i> |
| 5. Dialog Parsing for Task-Oriented Dialog Systems | <i>Natural Language Processing, Spring 22-23</i> |
| 6. Deadline and Rate Monotonic Scheduling for Linux 6.1 | <i>Operating Systems, Spring 22-23</i> |
| 7. A LIFO character device driver for Linux 6.1 | <i>Operating Systems, Spring 22-23</i> |
| 8. Sparse Matrix Multiplication with CUDA | <i>Parallel Programming, Spring 22-23</i> |
| 9. Distributed k-truss discovery in Dense Graphs | <i>Parallel Programming, Spring 22-23</i> |
| 10. Book Genre prediction from Title and Cover | <i>Machine Learning, Fall 22-23</i> |
| 11. MCTS for Extended Connect 4 | <i>Introduction to AI, Fall 22-23</i> |
| 12. Trickle: A Peer-Server-Peer Filesharing System | <i>Computer Networks, Fall 22-23</i> |
| 13. Hardware Neural Networks for MNIST | <i>Digital Logic & System Design, Fall 22-23</i> |
| 14. An ARMv4T CPU Implementation | <i>Computer Architecture, Spring 21-22</i> |
| 15. LSB Image Steganography library | <i>Signals and Systems, Spring 21-22</i> |
| 16. A Compiler for the WHILE language | <i>Programming Languages, Spring 21-22</i> |
| 17. DSCoin: A Blockchain Implementation | <i>Data Structures and Algorithms, Fall 21-22</i> |

SELECTED PERSONAL PROJECTS

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| 1. RubiksCube: An Interactive Quizzing System | <i>Fall 21-22</i> |
| 2. OrderBook: Tracking orders for market making games | <i>Summer 2023</i> |
| 3. IIT Course Planner: A Dependency Manager for Courses at IIT Delhi | <i>Spring 21-22</i> |
| 4. Personal Blog | <i>Ongoing</i> |

OTHER INTERESTS

Quizzing, Debate, Flute, Running, Badminton, Blogging, Volunteering, Teaching