Aradhye Agarwal

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EDUCATION

Indian Institute of Technology	Delhi, India
Dual Degree in Computer Science and Engg. **GPA: 8.19/10.00**	*Sep 2020 − ongoing*
Hope Hall Foundation School	Delhi, India
Senior Secondary School **GPA: 95.0/100.0**	*Sep 2018 − Sep 2020*
Delhi Public School RK Puram	Delhi, India
Secondary School **GPA: 93.7/100.0**	*Sep 2014 − Sep 2018*

SCHOLASTIC ACHIEVEMENTS

Google's Coding Competitions
- **Google Farewell Round A**: Achieved a global rank of 741 out of 8,100 participants
- **Google Code Jam 2021, Round 1**: Qualified with a global rank of 1499 out of 6,700 participants
- **Google Code Jam 2021, Round 0**: Advanced to the next round with global rank 4187 out of 37,400 candidates
- **Google Hashcode 2022:** Achieved a global rank of 868 out of 6,700 participants, with a score of 2,547,058 points

Academic Scholarships
- **Junior Science Talent Search Exam:** Placed 54 out of 22,000 participants and awarded 2,000 INR scholarship

RESEARCH EXPERIENCE

Monocular Depth Estimation: Paper published at CVPR 2024   *Jun 2023 − Dec 2023*
- Worked with Prof. Chetan Arora at IIT Delhi on the task of predicting depth maps from a single RGB image
- Proposed the Comprehensive Image Detail Embedding (CIDE) module, a novel method for extracting embeddings from images for conditioning diffusion models used for downstream tasks
- Established a new state of the art surpassing existing works by a large margin on indoor and outdoor datasets
- Published the work as the co-first author in a paper titled "Effective Conditioning of Diffusion Models for Monocular Depth Estimation" to the Computer Vision Pattern Recognition (CVPR) conference
- Attended CVPR'24 in Seattle, WA and respresented the work in poster session 6

The Third Monocular Depth Estimation Challenge: CVPR'24 Workshop   *Jun 2024*
- One of the winners of the MDEC challenge, with the work featuring in the workshop paper
- Co-author in the CVPR'24 workshop paper titled "The Third Monocular Depth Estimation Challenge".
- Invited to give a talk at the workshop due to the novelty of the method

Verbal Communication Framework for Field Robots   *Oct 2022 − Jan 2022*
- Worked under the supervision of Prof. Rohan Paul to automatically convert unreliable noisy speech transcriptions to reliable counterparts
- Extended the Cocke–Younger–Kasami algorithm to perform global correction guided by a formal grammar based contextual description.
- Integrated the module in the Robot Operating System pipeline, implementing it as a generic ROS module
- Deployed the module to deliver high-fidelity verbal instructions to a Clearpath Husky in real time
- Received a Letter of Recommendation (LoR) by Asst. Prof. Rohan Paul, School of Artifcial Intelligence, CSE

WORK EXPERIENCE

SWE Summer intern at Google India   *May 2024 − July 2024*
- Worked from the Hyderabad office to enhance and automate a contract generation system, streamlining workflows and reducing manual effort.
- Significantly reduced the SWE work effort in executing repetitive tasks from 5 working days to just 2.

TECHNICAL SKILLS

Languages: C/C++, Java, Python, JavaScript, MATLAB
Technologies: Git, Google Cloud Platform, Amazon Web Services, Linux, ROS, OpenCV, Scikit-Learn, PyTorch

RELEVANT COURSEWORK

Deep Learning, Natural Language Processing Linear Algebra, Probability Theory and Stochastic Processes, Digital Logic, System Design, Data Structures, Computer Architecture, Programming Languages, Optimization Methods, Operating Systems, Computation Theory, Machine Learning, Networks, Discrete Mathematics, Artificial Intelligence, Algorithm Design, Logic for Computer Science, Numerical Methods