Aviral Agrawal

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EDUCATION

- **M.S. Computer Vision**
  Carnegie Mellon University, Pittsburgh, PA — Expected Graduation Dec 2024
- **B.E. Computer Science | Minor in Finance**
  Birla Institute of Technology and Science, Pilani, Pilani campus, India — Graduated July 2020
  - **CGPA : 9.18/10** (Graduated in **DISTINCTION Division)**

Test Scores

- **GRE** : 331/340
- **TOEFL** : 120/120

COURSEWORK & SKILLS

- **Courses** (Undergraduate Studies)
  Machine Learning, Data mining, Data Structures and Algorithms, Design and Analysis of Algorithms, Object Oriented Programming, Operating System, Database systems, Compiler Construction, Computer Networks
- **Skills**
  PyTorch, TensorFlow, Python, Pytest, PySpark, C, C++, Java, Flask, AWS

PUBLICATIONS & PATENTS

- **Development of a Machine Learning Based Model for Damage Detection, Localization and Quantification to Extend Structure Life**
  Procedia CIRP, 98, 199-204 — Link — March, 2021
  - This paper proposes the transformation of a physical structure's mechanical response features to visual features which are fed to a CNN network delivering upto 85% better prediction than the previous state-of-the-art
- **5 PATENTS**
  Samsung Research Institute Bangalore — 2022-2023
  - Provisional filing complete - 202241011598, 202241011605, 202241042992, 202241072649, 202241073429 (Primary inventor in four patents)

EXPERIENCE (3+ YOE)

- **SAMSUNG RESEARCH INSTITUTE BANGALORE**
  Senior Engineer (Computer Vision), India — Jan 2021 - Jul 2023
  - Ownership of AI-based replacement of Video compression In-Loop filter achieving 10% bd-rate gain
- **ORACLE**
  DevOps Engineer, India — Nov 2020 - Jan 2021
  - Part of the OCI Exascale team. Responsible for enhancing cloud-based exascale services
- **AMAZON**
  Research Engineer Intern, India — Jan 2020 - Jul 2020
  - Worked on Reverse Geocoding model and an Address Classifier model. Models are currently in production in Amazon India and middle-east marketplace respectively
- **SAMSUNG RESEARCH INSTITUTE BANGALORE**
  Student Trainee, India — May 2019 - Jul 2019
  - Created a multi-focal lens array solution for fusing captured images to enhance legibility in resultant image achieving 1.5 dB peak-signal-to-noise-ratio (PSNR) improvements
- **MAPMYINDIA**
  Intern, India — May 2018 - Jul 2018
  - Created a supervised ensemble model for missing point imputation in traffic sensor data giving 5% improvement in traffic prediction accuracy