Jayant Duneja

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EDUCATION

University of Colorado Boulder *May 2025*
MS in Computer Science *GPA: 4.0*

International Institute of Information Technology, Hyderabad, India *May 2022*
B.Tech(Honors) in Electronics and Communication *GPA: 8.86*

- Awards/Achievements: Dean's List Award for Academic Excellence for 3 semesters

PROFESSIONAL EXPERIENCE

Walmart Global Tech **Bangalore, India**
Software Engineer II *July 2022 - July 2023*

- Developed an event-driven architecture for data pipelines using Java, SpringBoot, and Google PubSub which helped automate ~75 workflows. Added unit and integration tests employing Junit and Sonarqube.
- Designed and implemented pipelines within Azure Data Factory to facilitate the simulation of ETL processes.

Center for Visual Information Technology, IIIT - Hyderabad **Hyderabad, India**
Undergraduate Researcher *January 2022 - October 2022*

- Worked on improving the pipeline for generating bounding boxes of MeronymNet, a controllable multi-category object generation model utilizing Computer Vision Techniques.
- Conducted various experiments by altering the existing structure of the model, introducing new losses, and tuning various hyper-parameters to obtain better accuracies.

Walmart Global Tech **Bangalore, India**
Software Engineering Intern *May 2021 - July 2021*

- Worked in the Customer Experience Team focusing on providing a one-stop solution to businesses for transaction-related communication across all channels.
- Developed and tested a Command Line Interface tool in Python to reduce lookup time and automate examination of error logs on Splunk Dashboard utilizing API Calls; Was awarded with PPO.

PUBLICATIONS

- Gahoi, A., et al. (2022). Gui at MixMT 2022 : English‑Hinglish: An MT approach for translation of code mixed data. Proceedings of the Seventh Conference on Machine Translation (WMT), pages 1126–1130. arXiv preprint arXiv:2210.12215

PROJECT EXPERIENCE

Large Prime Generator

- Created a distributed system with a central server and dynamic worker nodes to find large prime numbers.
- Used the Rabin-Miller test and Python's multiprocessing library, along with a random number optimization technique, to efficiently identify primes without testing every possible number.

Image Style Transfer

- Performed style transfer from a reference image in one domain to another image, to 'paint' the input image in the reference image's style, through Computer Vision techniques.
- Employed a VGG-19 CNN Deep Learning model trained on the ImageNet Database, incorporating the Matting Laplacian Method to ensure compatibility and accuracy in the style transfer process.

Manga Colorization

- Developed an innovative colorization technique for Manga comics, emphasizing pattern continuity and intensity continuity in the color propagation process.
- Utilized the OpenCV and NumPy libraries in Python to implement this technique.

SKILLS & INTERESTS

Programming Languages: Python, Java, C/C++, JavaScript, SQL, Bash, Matlab, HTML, CSS

Tools/Frameworks: SpringBoot, OpenCV, Numpy, PyTorch, TensorFlow, Kubernetes, Docker, Git, Sonarqube, Concord, Jenkins, Linux, Unix, GCP, REST APIs, Splunk, MongoDB, Databricks, NodeJS, React, MySQL, Postgres, HDFS, AWS, Kafka, Spark, Hadoop, TypeScript