(+91) 7018-415-958
shivam.iitmandi@gmail.com
LinkedIn: shivam7569
GitHub: shivam7569
Bengaluru, Karnataka

Shivam Chaudhary

Senior Computer Vision Engineer

SUMMARY

Senior Computer Vision Engineer at Bosch, Bengaluru, responsible for developing and maintaining execution plans, sophisticated data pipelines and production scale algorithms in various projects involving autonomous vehicle data. Keen and responsive to advancements in Machine/Deep Learning and like to implement research papers for in-depth understanding of algorithms and document through blogs.

SKILLS

Programming Languages: Python, Scala, SQL, Julia
Big Data Tools: Spark, Solr, HBase, Hadoop, Hive
Machine/Deep Learning Frameworks: Pytorch, Tensorflow, OpenCV, Scikit-Learn
Other Technologies: Git, GPU Systems like HPC, Jetson Nano, YARN

PROFESSIONAL EXPERIENCE

Sr. Computer Vision Engineer

Aug '22 - Present

Bosch Global Software Technologies

Bengaluru, Karnataka

- **Published a research paper and a patent** on enhancing the performance of foundational models (EVA-02). Exploited over 90% unlabelled Bosch dataset **to improve performance by ~5%**
- Pioneered the creation of a cutting-edge Marketplace tailored for vision-related assignments, starting from ideation to execution
  - Excelled in training different **vision transformer** models like SWin, DeiT, and DeTr with an average performance deviation of approximately **6.72%**
- Collaborated with Bosch Romania Team to **enhance the performance** of foundational model (EVA) **by ~4.31%** through cluster analysis and hypothesis testing of embeddings **from Dinov2**
- Spearheaded the deployment of an **object detector, tracker and motion analyser on an edge device** viz. MEET (Mobility Edge Ecosystem Test-bed) based on Jetson Nano with a latency of **~30 FPS**
- Refactored the legacy codebase for dense vision tasks with the flexibility to seamlessly incorporate SOTA architectures for greater adaptability and **improved efficiency by 14%**
- Designed and developed image segmentation pipeline for **fisheye camera images** for automotive industry, incorporating ConvNeXt based architecture **giving f1-score of ~57%**

Data Scientist II

Oct '20 - Jul '22

HiLabs Inc.

Pune, Maharashtra

- **Built a multi-million dollar data pipeline** to transfer data anomalies from RDBMS to HBase and Solr for remediation via a ticketing system, while evaluating the data quality
  - **Amplified the DQI from ~78 to ~86** and refactored the anomaly mitigation process of Anthem, leading US health insurance provider, estimated to **prevent an annual loss of over $200 million**
- Implemented a production scale USP OCR product **using NLP** and custom algorithm after enhancing the image quality of the contracts using **GANs**, **generating over $100 thousand**
- Monitored daily data loads, analysed changes against the data reservoir, and automated **daily report generation for over 100 million records**
- Researched about Apache Solr and the effects of its parameters on its functionality to **reduce the indexing time** of dataframes with billions of records **by ~17% reduction**

Machine Learning Engineer Intern

Jan '20 - Mar '20

GMO Research

Shibuya, Japan

- **Benchmarked ML Algorithms** viz. Random Forests, Decision Trees, DNNs, etc., on probability of marketing surveys to be answered within different time windows of 6 hours
  - Overcame challenges of imbalanced data using SMOTE and custom evaluation, **achieving a model efficacy of 91%**, enabling more efficient targeting of surveys to responsive panels

EDUCATION

Bachelor of Technology in Mechanical Engineering, Minor in Intelligent System

Aug '16 - Jul '20

Indian Institute of Technology, Mandi

Mandi