

Prateek Mehra

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EDUCATION

- **Motilal Nehru National Institute of Technology (MNNIT Allahabad)**
Bachelor of Technology ; CPI: 8.07

Prayagraj, India
July 2018 - June 2022

SKILLS

- Core: Computer Vision, Deep Learning, Time Series Forecasting, Clustering, Applied ML Systems
- Frameworks: PyTorch, TensorFlow, Scikit-Learn, OpenCV
- Languages: Python, C++, Go, SQL
- Data Analysis: NumPy, Pandas, Matplotlib
- DevOps: Kubernetes, Docker, Gitlab CI, Grafana, Linux, Conda
- Monitoring/Infra: Kibana, Elasticsearch, Virtual Machines
- Cloud: AWS, GCP

EXPERIENCE

- **Eatclub Brands (Formerly Box8), Bengaluru**
Applied Machine Learning Engineer

Bengaluru, India
June 2022 - Present

- **Computer Vision (Edge)**: Developed a low-cost attendance system involving anomaly detection using computer vision for 450+ outlets across India, saving \$20k in operational cost and reducing QR attendance rate from 22% to 2%
- **Computer Vision (Cloud)**: Developed, deployed and monitored 8 computer vision pipelines involving object detection, image classification and instance segmentation using Airflow and Kibana, processing 40k+ images/day and reducing manual audit effort by 75% with up to 0.947 mAP@0.5.
- **Time series forecasting**: Used Prophet to predict the usage of critical resources in the Ops and Cart microservices, leading to a 5% cost reduction and lesser downtime incidents. Performed EDA, data preprocessing and cross validation to bring down the Peak MAPE below 10%.
- **Clustering**: Generated semantic address embeddings using transformer-based language models and clustered them using DBSCAN to create PoI polygons for delivery optimization.
- **ML Lifecycle Experience**: Involved end-to-end from data wrangling and annotation to model training, deployment, monitoring, false-positive/false-negative analysis, iterative threshold tuning and inference optimization using ONNX/OpenVINO.
- **Selected Systems**: Face Recognition • Human Grooming Detection • Burnt Pizza Detection • Number Plate Recognition • Camera Inspection • Predictive Application Scaling • PoI Mining via Address Embeddings

- **Glubber Technologies, Pune**
Software Engineering Intern

Remote
March 2021 - May 2021

- **BOM Service**: Created, tested and deployed RESTful APIs built around the controller-service-repository architecture for the BOM Service involving graph traversals.
- **Query Design**: Designed cypher queries for the service on neo4j and unit tested them post integration with the code base.

PROJECTS

- **JalLijiye — Real-time Hydration Monitoring System**
[Github Link]

April 2025

- **Summary**: Built a lightweight real-time hydration monitoring system using a custom-trained YOLOv8n bottle detector, achieving 0.995 mAP@0.5 and 0.89 mAP@0.5:0.95.
- **Methodology**: Optimized low-resource local inference using class-filtered detection, low-FPS scheduling, lightweight facial heuristics and threaded OpenCV pipelines for robust drink-event tracking.

ACHIEVEMENTS/RESPONSIBILITIES

- Team rank 19 and 26 in ICPC 2021 Asia Kanpur and Asia Gwalior-Pune programming contest respectively.
- Rated top 6% globally on Leetcode. [Link]
- Qualified to Facebook Hacker Cup 2021 Round 2.
- Mentored 4 Junior ML Engineers in the data-tech team.