Arshad Khatib

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EDUCATION

•**National Institute of Technology, Surat** *2024 – Present*
B.Tech in Artificial Intelligence; CGPA: 7.98 (Current, 4th sem) Surat, India
– **Relevant Coursework**: Data Structures, Design and Analysis of Algorithms, Database Management Systems, Operating Systems, Computer Networks, Machine Learning, Deep Learning, Linear Algebra, Probability & Statistics.

RESEARCH EXPERIENCE

•**Hybrid Ensemble for Astrophysical Document Classification** *Sept 2025 - Oct 2025*
TRACS @ WASP 2025 (Shared Task) | Team: Clutch or Cry **Accepted Paper** | Kaggle Rank: 4th
– **Tech Stack**: Python, PyTorch, astroBERT, XGBoost, Scikit-learn, Pandas, NumPy, LaTeX.
– **Developed** a hybrid ensemble model for multi-label text classification, achieving **4th place** on Kaggle leaderboard.
– **Synthesized** semantic embeddings from domain-adapted astroBERT with rule-based heuristics to maximize F1-score.
– **Published** research on mitigating class imbalance in astrophysical datasets via XGBoost meta-learners at WASP 2025.

PROJECTS

•**HFT Market Analysis & Trading Platform** *Dec 2025 - Jan 2026*
Surveillance & Pattern Discovery Live Website | Github
– **Tech Stack**: C++, Python, gRPC, DeepLOB CNN, AWS (ECS, RDS, S3), TimescaleDB, WebSockets, Docker.
– **Built** an ultra-low latency HFT platform processing 160+ snapshots/sec (<10ms) via dual-core C++/Python Microservices.
– **Deployed** DeepLOB CNN for real-time price direction prediction (63.4% accuracy) and automated spoofing detection.
– **Architected** scalable AWS infrastructure with TimescaleDB, achieving 8:1 compression for high-volume time-series data.

•**Trendora (Full Stack AI-Powered Fashion Marketplace)** *July 2025 - Aug 2025*
Winner, Web Wonders 2025 (1st Rank) Live Website | Github
– **Tech Stack**: Next.js, Firebase, GenAI (Gemini 2.5), LangChain, Leffa ML (CV), Razorpay, Shiprocket.
– **Architected** 'StyleSphere' social commerce hub and integrated 'Zyra' GenAI chatbot for personalized styling advice.
– **Deployed** Leffa ML Virtual Try-On (Computer Vision) to visualize outfits, significantly reducing return rates.
– **Developed** a robust e-commerce backend handling payment orchestration (Razorpay) and automated logistics (Shiprocket).

•**OneFlow: Plan-to-Bill Platform** *Nov 2024*
Oddo Hackathon @ IIT Gandhinagar Live Website | Github
– **Tech Stack**: Next.js, PostgreSQL, Prisma ORM, Tesseract OCR, TypeScript, Docker.
– **Developed** a full-stack billing solution with Role-Based Access Control (RBAC) in a 24-hour offline hackathon.
– **Constructed** scalable bulk data ingestion pipeline for automated user onboarding via Prisma ORM transactions.
– **Integrated** Tesseract OCR to automate data extraction from physical invoices, streamlining financial operations.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, TypeScript, JavaScript, HTML5, CSS3, R, Bash/Shell
Machine Learning & AI: PyTorch, TensorFlow, Scikit-Learn, XGBoost, LangChain, RAG, LLMs, NLP, Computer Vision, MLOps, Prompt Engineering
Web Development: Next.js, React.js, Node.js, FastAPI, Tailwind CSS, Redux, WebSockets, RESTful APIs, Microservices
DevOps & Tools: Git, Docker, Kubernetes, AWS (EC2, ECS, S3), Google Cloud (GCP), CI/CD, Linux, Postman, LaTeX

ACHIEVEMENTS

•**1st Place Winner, Web Wonders 2025**: Secured top rank in Full-stack Web dev competition for 'Trendora'.

•**Kaggle Rank 4, WASP 2025**: Achieved 4th place on Kaggle leaderboard for TRACS Shared Task.

•**Finalist, ACM Summer Challenge 2025**: Qualified as finalist in competitive programming contest (Top 2%).

•**Best Actor, Rangmanch 2025**: Demonstrated exceptional public speaking, dramatics, and cross-functional team collaboration.

POSITIONS OF RESPONSIBILITY

•**Google Developer Group (GDG)**: Junior Developer, selected for technical expertise (Oct 2025 – Present).

•**ACM Student Chapter**: Executive Member, organizing technical workshops (Sept 2025 – Present).

•**Mindbend**: Co-Head, Specialized in Sponsorship and Outreach (Nov 2025 – Present).