

# Arshad Khatib

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## EDUCATION

### •National Institute of Technology, Surat

B.Tech in Artificial Intelligence; CGPA: 7.95 (Current)

2024 – Present

Surat, Gujarat

- **Relevant Coursework:** Data Structures, Design and Analysis of Algorithms, DBMS, Computer Organisation, Discrete Mathematics, Linear Algebra.

## 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](#)

- **Engineered** a hybrid two-level ensemble model to solve multi-label classification of telescope facility roles, processing complex astrophysical literature datasets.
- **Outperformed** baseline models by securing **4th place** on the official Kaggle leaderboard, leading to a co-authored paper acceptance at the prestigious WASP 2025 workshop.
- **Synthesized** semantic context from domain-adapted **astroBERT** with symbolic matching from a rule-based classifier to maximize prediction accuracy.
- **Optimized** per-role performance by deploying four independent **XGBoost** meta-learners, successfully mitigating severe class imbalance issues in the training data.

## PROJECTS

### •Trendora (AI-Powered Fashion Marketplace)

July 2025 - Aug 2025

Winner, Web Wonders 2025 (1st Rank)

[Live Website](#) | [Github](#)

- **Architected** 'StyleSphere', a high-engagement social hub featuring a Reels-style infinite scroll and live streaming capabilities, significantly enhancing user retention.
- **Integrated** the 'Zyra' AI Chatbot using **LangChain** and **Gemini 2.5 Flash**, providing context-aware styling advice to personalize the shopping experience.
- **Deployed** a Virtual Try-On feature utilizing **Leffa ML**, allowing users to realistically visualize outfits and reducing potential return rates.
- **Built** a robust e-commerce backend with **Next.js** and **Firebase**, implementing secure **Razorpay** checkout and real-time **Shiprocket** logistics tracking.

### •Biodegradable Material Classifier (Edge AI)

Aug 2025 - Sept 2025

Makernova - Robotics Club

[Documentation](#) | [Github](#)

- **Spearheaded** the development of an autonomous waste classification system using a custom **CNN** architecture, achieving **97% accuracy** in material identification.
- **Implemented** the model on a **Raspberry Pi** using **OpenCV**, enabling real-time inference on live webcam feeds for robotic sorting applications.
- **Documented** the complete model architecture and hardware integration process to facilitate reproducibility and future team handovers.

## TECHNICAL SKILLS

- **Languages:** Python, C++, SQL, JavaScript (ES6+), HTML5/CSS3
- **AI & Machine Learning:** PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV, astroBERT, LangChain
- **Web Development:** Next.js, React.js, FastAPI, Node.js, Tailwind CSS, REST APIs
- **DevOps & Tools:** Git, GitHub, Docker, Firebase, Vercel, AWS (EC2), Google Cloud Platform, Linux

## ACHIEVEMENTS

- Top 5 Global Rank**, Secured **4th place** on Kaggle Leaderboard for TRACS @ WASP 2025 Shared Task. 2025
- Winner (1st Place)**, Web Wonders 2025 Hackathon (Fashion Theme) for project 'Trendora'. 2025
- Finalist**, ACM Summer Challenge 2025 - Competitive programming and development contest. 2025
- Best Actor & Play**, Won double accolades at 'Rangmanch 2025', demonstrating strong public speaking skills. 2025

## POSITIONS OF RESPONSIBILITY

- Junior Developer**, Google Developer Group (GDG) on Campus, NIT Surat (*technical expertise*) Oct 2025 - Present
- Executive**, Association for Computing Machinery (ACM), NIT Surat (*Organizing tech events*) Sept 2025 - Present
- Member**, Kirdaar (CHRD) - Acting and Dramatics Club, NIT Surat Jan 2025 - Present