Dhaval Pandit

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EDUCATION

University of Texas at Arlington   01/2024 - 01/2026
Master of Science in Computer Science.   *GPA: 3.33/4*
Parul University   07/2020 - 06/2023
Bachelors in engineering in Information Technology   *GPA: 9.33/10*

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, Objective C, MySQL; Machine Learning, Deep Learning, Large Language Model, Computer Vision, Model Training; PyTorch, TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Caffe; HTML, CSS, JavaScript, React; AWS, Docker, Kubernetes; Data Structures & Algorithms, System Design

Automation & Testing Tools: Selenium, JUnit, Postman, Git, Black Box Testing, Boundary Value Testing, Equivalence Class Partitioning

Quality Assurance & Testing Methodologies: Software Development Life Cycle (SDLC), Test Automation, Manual Testing, Synchronous & Asynchronous Test Execution, API Testing, SQL Database Validation, Test Driven Development (TDD), Behavior Driven Development (BDD)

Tools & Frameworks: JIRA, Agile Methodologies, Scrum, Firebase

Other Technical Skills: Root Cause Analysis, Troubleshooting Automation Failures, IOS Development

WORK EXPERIENCE

Graduate Research Assistant

RAID Lab, University of Texas at Arlington – Arlington, Texas   *01/2025 - 12/2025*

- Developed an RFID-based lab entry system using Python and Streamlit with **99.7% tag read accuracy** and **sub-250ms latency**, enabling seamless recognitions for **1,000+ daily entries**
- Applied Python, OpenCV, and machine learning techniques to build a conveyor belt identification system that **improved detection accuracy by 35%** and boosted throughput **efficiency by25%**
- Integrated Flask APIs with Streamlit dashboard, reducing manual monitoring by **50%** and improving research data accessibility
- Documented research outcomes for academic reporting and publication; partnered with cross-functional teams to disseminate findings via journal papers and technical presentations

Software Engineer

Vistaura, Vadodara, Gujarat, India   *11/2022 - 11/2023*

- Designed and implemented public- use detection technology using python and machine learning frameworks.
- Automated end to end testing and validation using Python + Selenium, Streamlining AWS storage, Backend Api workflows and reducing Manual verification effort by 40%
- Developed and Optimized OpenCV-based detection features as SDE-1, improving model reliability and runtime performance in live system

PROJECTS

Fleet Vision – Vehicle Overspeed Detection System

- Delivered an AI-Powered traffic monitoring system achieving **95%+** detection accuracy across **20+** simultaneous video feeds/Live cam, in urban and highway scenarios.
- Improved real-time vehicle recognition and speed estimation, reducing false positive by **30%** compared to baseline models.
- Automated alert pipeline accelerated law enforcement response time by **40%**, currently being documented in an academic paper.

Stock & Sentiment Analysis using transformers

- Fine-tuned multiple transformer models (DistilBERT, FinBERT, RoBERTa, DistilRoBERTa) **on 6,000+** stock-related tweets, achieving up to **89%** accuracy in financial sentiment classification.
- Benchmarked models across accuracy, inference speed, and size, with DistilRoBERTa offering the best trade-off for real-time deployment in financial applications.
- Designed an end-to-end NLP pipeline for data preprocessing, tokenization, and evaluation, enabling scalable sentiment insights to support market prediction and decision-making.