

Vikas Prajapati

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Summary

Results-driven AI/ML Engineer with 1+ years of industry experience specializing in computer vision and NLP solutions. Demonstrated expertise in optimizing deep learning models (reducing inference time by 40% while maintaining accuracy) and building scalable production systems with Django and FastAPI. Passionate about developing accessible AI applications that solve real-world problems across judicial, security, and enterprise domains.

Experience

Software Developer <i>Houston System</i>	Oct 2024 – Present <i>Greater Noida, Uttar Pradesh</i>
<ul style="list-style-type: none">• Architected a real-time face detection and recognition system with multilingual chatbot integration, achieving 95% recognition accuracy across diverse lighting conditions and user demographics.• Implemented robust Role-Based Access Control (RBAC) systems using Django RestAPI and FastAPI with secure JWT authentication, reducing unauthorized access attempts by 80%.• Developed a comprehensive case management system for the Punjab and Haryana High Court, streamlining judicial workflows and reducing case processing time by 35%.• Established data-driven project management using JIRA and Excel-based reporting, enabling accurate sprint planning and stakeholder communication.	
Software Engineer <i>Multicoreware Inc.</i>	Oct 2023 – Sep 2024 <i>Chennai, Tamil Nadu</i>
<ul style="list-style-type: none">• Spearheaded end-to-end software lifecycle management for high-availability systems, reducing time-to-market by 20% through improved cross-functional coordination.• Engineered state-of-the-art AI/ML solutions using MaxViT, YOLOv5, and Mask R-CNN models, optimizing inference performance by 40% using AIMET techniques.• Constructed resilient Python backend services with Flask and FastAPI that supported 10,000+ concurrent users for a major East Coast client's Angular application.• Cultivated high-performance team culture through Agile coaching and code reviews, reducing bug rates by 25% and improving overall code quality metrics.	

Projects

Visitor Management System <i>Python, Django, ORM, RBAC, API, MySQL, Git</i>	Feb 2025 – Present
<ul style="list-style-type: none">• Developing an enterprise-grade Visitor Management System with Django and MySQL, implementing JWT-based RBAC authentication system supporting 3 distinct user roles.• Creating dynamic employee availability scheduling that optimizes visitor meeting allocation and reduces scheduling conflicts by an estimated 60% .• Implementing intelligent visitor identification system that reduces registration time by 75% for returning visitors while maintaining data integrity.• Designing comprehensive admin controls for employee management with hierarchical permission structures compliant with organizational security policies.	
Automatic Number Plate Recognition <i>Python, DL, FastAPI, MySQL, Git</i>	Nov 2024 – Jan 2025
<ul style="list-style-type: none">• Engineered an ANPR system achieving 97% accuracy in diverse environments using YOLOv5, enhancing traffic monitoring capabilities for law enforcement agencies.• Executed comprehensive data pipeline handling 50,000+ vehicle images across various lighting conditions and camera angles.• Integrated the deep learning model with FastAPI backend, enabling <200ms response time for real-time recognition requirements.• Optimized model deployment for edge devices, reducing computational requirements by 30% while maintaining recognition accuracy.	
Court Guidance Case Management System <i>Python, Tkinter, MySQL, Git</i>	Oct 2024 – Oct 2024
<ul style="list-style-type: none">• Designed an accessible kiosk-based Court Case Guidance System supporting users with diverse disabilities, increasing judicial system accessibility for underserved populations.	

- Implemented multi-modal interaction methods with 98.5% uptime and average response time under 2 seconds.
- Enabled real-time case information retrieval through multiple identifier types, reducing information access time by 70% compared to manual processes.
- Optimized the system for public legal environments with enterprise-grade security protocols protecting sensitive case data.

Testorent (Qualcomm) <i>Python, Deep Learning, CNN</i> , Git, Bitbucket, Ubuntu	Oct 2023 – April 2024
<ul style="list-style-type: none"> • Optimized deep learning models across multiple frameworks while maintaining accuracy loss within <1%, enabling deployment across Qualcomm’s heterogeneous hardware. • Implemented advanced quantization techniques (INT8, INT16, FP16) using both post-training and quantization-aware training methods, reducing model size by 75%. • Leveraged Qualcomm’s AIMET toolkit to perform high-fidelity quantization and layer-by-layer sensitivity analysis, enabling efficient compression with minimal accuracy degradation. • Engineered quantization-aware strategies and calibration methods validated through automated regression testing, ensuring production-ready model performance. 	

Education

PG-Diploma in Big Data Analytics	
<i>Center of Development of Advanced Computing, Bangalore, Karnataka</i>	<i>March 2023 – Aug 2023</i>
Bachelor of Technology in Electronics and Communication Engineering	
<i>Dr. Rammanohar Lohia Avadh University, Ayodhya, Uttar Pradesh</i>	<i>July 2018 – Oct 2022</i>
Senior School Certificate	
<i>Radiant Central Children Public School, Jalalpur, Ambedkar Nagar, UP.</i>	<i>July 2014 – Oct 2016</i>
Secondary School Certificate	
<i>Radiant Central Children Public School, Jalalpur, Ambedkar Nagar, UP.</i>	<i>July 2012 – May 2014</i>

Technical Skills

Programming Languages: Python, R, C/C++, JavaScript, SQL, Shell Scripting, HTML5, CSS
AI/ML Frameworks: PyTorch, TensorFlow, Keras, scikit-learn, ONNX, AIMET, Torchvision, OpenVINO
Web Frameworks: Django, FastAPI, Flask
Data Processing: NumPy, Pandas, SciPy, Matplotlib, Seaborn, Tensor, Polar
Computer Vision & NLP: OpenCV, Torchvision, SpaCy, NLTK
Databases: MySQL, PostgreSQL, MongoDB
DevOps & Cloud: AWS (EC2, S3, RDS), Docker, Git, Bitbucket, CI/CD pipelines
Development Tools: VS Code, PyCharm, JupyterLab, Google Colab, Kaggle, Roboflow
Core Competencies: Deep Learning, Computer Vision, NLP, System Design, API Design, Agile/Scrum
Soft Skills: Problem Solving, Cross-functional Collaboration, Technical Documentation, Project Management