

Vikas Prajapati

+91 9161589883 | vp191198@gmail.com | linkedin.com/in/vikas1998 | github.com/VikasPrajapati1998

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

Oct 2024 – Present

Houston System

Greater Noida, Uttar Pradesh

- **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

Oct 2023 – April 2024

Multicoreware Inc.

Chennai, Tamil Nadu

- **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 | *Python, Django, ORM, API, MySQL, Git*

Feb 2025 – Present

- 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 | *Python, DL, FastAPI, MySQL, Git*

Nov 2024 – Jan 2025

- 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 | *Python, Tkinter, MySQL, Git*

Oct 2024 – Oct 2024

- 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.

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| 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

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| 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

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| 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 |