

# MANAS KUMAR THAKUR

New Delhi, India

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## Education & Achievements

### Bachelor of Technology in Computer Science (AIML)

*Dronacharya College of Engineering*

**Expected Graduation: 2027**

*CGPA: 7.5/10*

## Experience

### AI Engineer Intern

**Jun. 2025 – Aug. 2025**

*API.Market*

*San Francisco, California, United States – Remote*

- Designed and deployed multi-agent AI systems to automate tasks involving web content analysis and community engagement.
- Leveraged LLM frameworks and retrieval tools to build scalable, context-aware agents for real-world API use cases.
- Built supporting microservices and infrastructure for metadata extraction, categorization, and structured content generation.

### AI Engineer Intern

**Jun. 2025 – Aug. 2025**

*Noveum AI*

*San Francisco, California, United States – Remote*

- Contributed to the development and evaluation of LLM-driven workflows focused on reasoning, data validation, and prompt optimization.
- Worked on AI tooling to streamline dataset processing, improve evaluation metrics, and enhance model alignment.
- Collaborated with research engineers to refine experimental pipelines for performance benchmarking.

### Backend Developer Intern

**Feb. 2025 – May 2025**

*OSS & Consulting*

*Remote, India*

- Designed a PostgreSQL database for a CRM platform, improving data consistency and enabling efficient client management workflows.
- Collaborated on end-to-end application design, aligning backend logic with CRM features to streamline user experience.
- Deployed and maintained backend infrastructure on a local bare-metal cloud, supporting early-stage product rollout.
- Managed cloud servers and led the backend migration from on-premise to GCP VM instances, enhancing scalability and reducing latency by 30%.

## Technical Projects

### SIH 2023 - Lithology Project | YOLOv8, Computer Vision, Python

**December 2023**

- Developed an intelligent system for real-time object detection and classification using machine learning and computer vision.
- Scraped and annotated a custom lithology image dataset, ensuring high-quality training data for model performance.
- Split dataset in a 70:20:10 ratio for training, validation, and testing, enabling robust evaluation of model accuracy.
- Fine-tuned a YOLOv8 model on the curated dataset, achieving 99.97% accuracy and 99.83% precision on the test set.

### Buildspace - Pothole Detection and GPS Tagging | YOLO, OpenCV, GPS API, Python

**August 2024**

- Developed a real-time pothole detection system using YOLO and OpenCV to identify road defects.
- Integrated GPS tagging to map detected potholes, providing precise location data for road maintenance teams.
- Optimized the system for deployment in smart city infrastructure to improve road safety.

### IDE 2024 - ML for Construction Progress Monitoring | Deep Learning, OpenCV, Python

**September 2024**

- Built a real-time ML-powered system for tracking construction progress through automated image analysis.
- Implemented an anomaly detection module to flag inconsistencies and prevent reporting errors.
- Enhanced efficiency by reducing reliance on manual progress tracking and improving data accuracy.

## Technical Skills

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**Programming Languages:** Python, R, SQL, C, C++

**Machine Learning & AI:** Supervised/Unsupervised Learning, Deep Learning, Transfer Learning, Computer Vision, Object Detection, NLP, Reinforcement Learning

**Frameworks & Libraries:** PyTorch, TensorFlow, Scikit-learn, FastAI, OpenCV, YOLOv8, Hugging Face, LangChain, SentenceTransformers, OpenAI API

**Model Architectures:** CNNs, RNNs, LSTMs, Transformers, U-Net, DINO, CLIP

**Data Science & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Plotly, Streamlit, Jupyter Notebook

**MLOps & Tools:** Weights & Biases, MLflow, Docker, Git, CUDA, NVIDIA Jetson, CI/CD

**Databases & Vector Stores:** PostgreSQL, MongoDB, Redis, LanceDB, Pinecone

## Leadership & Achievements

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**Smart India Hackathon Winner:** SIH 2023 Winner, Automated lithology classification using AI and deep learning.

**Engineers Day Idea Competition (DCE):** Secured second place for designing a fire-resistant system for car accidents.

**IDE Bootcamp Selection:** Advanced to Phase 2 at Amity University Rajasthan, collaborating on innovations.

**AI Team - Deviators Club:** Worked on AI/ML projects, gaining hands-on experience in advanced technologies.