

# MANAV AVDESH JAISWAL

Clearwater, Florida.

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## PROFESSIONAL SUMMARY

Results-driven **Machine Learning Engineer** with 2+ proven experience designing, developing, and deploying **end-to-end AI/ML solutions and cloud-native applications**. Skilled in **deep learning, computer vision, large language models (LLMs), and data analytics**. Strong background in **MLOps, real-time edge deployment, and distributed systems**.

## EDUCATION

Kent State University

May 2025

Master's in Computer Science – GPA: 3.9/4.0

## EXPERIENCE

**Cloud & Security Engineer, Kent State University, Clearwater, FL**

July 2025 – Present

- Architecting a **secure, cloud-based cyber range** using **OpenStack** to support academic cybersecurity research.
- Designed scalable **virtual lab infrastructure** with compute nodes, controller nodes, storage systems, and **secure network configurations** for real-time simulations.

**Data Engineer, Kent State University, Kent, OH**

September 2023 – December 2023

- Led development of a **computer vision model** to track homelessness progression in Los Angeles via **satellite imagery**, improving detection accuracy by **20%**.
- Automated collection of **2,000+ geospatial images** using Google Maps scripting and applied **image augmentation** to improve model robustness and trained CNN models achieving **93% precision** and **90% recall** for detection tasks.

**Machine Learning Engineer, Sar Software Solutions, Mumbai**

October 2021 – December 2022

- Integrated and deployed **real-time facial recognition systems** on **Raspberry Pi**, reducing unauthorized access incidents by **40%**.
- Enhanced **OpenCV**-based detection accuracy and implemented **RESTful APIs** for device server communication.
- Containerized ML pipelines with **Docker** for rapid deployment across client environments.
- Contributed to **15 client rollouts** of high-security and ATM **surveillance** applications, strengthening security measures and improving **customer satisfaction**.

**Software Developer, Facet Leon, Mumbai**

February 2021 – August 2021

- Developed custom **CRM modules** using **C# and .NET**, improving large-scale data processing efficiency by **20%** and supporting multiple **cross-functional** development teams.
- Automated report generation** and built responsive **WordPress** websites, reducing manual reporting time by **40%** while enhancing **mobile usability** and system performance.

## PROJECTS

**Title: AI PDF Chatbot – Full-Stack Intelligent Document Assistant using LangChain & LangGraph**

- Built a **full-stack AI-powered** document Q&A system with **Next.js, Node.js, TypeScript, and LangChain**.
- LangGraph-based response routing** to improve semantic relevance by **80%** and reduce retrieval latency to **<500ms**.
- Integrated **OpenAI APIs** and **Supabase** for scalable storage and embeddings, supporting **10MB+ PDF ingestion**.

**Title: Automatic Face Mask Detection for Covid19**

**Paper Published In:** International Journal of Research and Analytical Reviews

- Led a **3-member team** using **Agile Methodology** to build a **CNN-based detection system** (TensorFlow, Keras, PyTorch) achieving **94% accuracy** on 5,000+ images.
- Deployed on **Raspberry Pi** for **edge inference**, enabling real-time alerts and reducing manual monitoring by **60%**.

## SKILLS

- Programming Languages:** Python, Java, C, C++, C#, JavaScript, R, HTML, CSS
- ML & AI Frameworks:** TensorFlow, PyTorch, Keras, Scikit-Learn, OpenCV, YOLO, LangChain, LangGraph, NumPy, Pandas, Deep Learning, Computer Vision, NLP, Transformers, CNNs, AWS SageMaker, MLflow, Hugging Face
- Databases & Visualization:** SQL, MySQL, Firebase, Supabase, Tableau, Power BI
- Cloud & DevOps:** AWS (EC2, S3, Lambda, SageMaker), Docker, Git, CI/CD, Firebase Hosting, Kubernetes
- Tools & Methodologies:** REST API, Agile/Scrum, JIRA, GitHub, Crystal Reports, WordPress

## CERTIFICATIONS

- AWS-DA-02: Data Analytics on AWS**, AWS, May 2024
- PH125.2x: Data Science: Visualization**, HarvardX, April 2024
- PY0101EN: Python for Data Science**, IBM, June 2023