

Nikhil Mandayam Adyapak

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Seeking 2026 Summer Internships/Fall Co-ops in ML, MLOps, Data Science Internships

EDUCATION

University of Wisconsin-Madison	Sep 2025 - May 2027
Masters in Data Science	GPA - 3.65/4.00
Coursework: Machine Learning, Foundation Models, Database Design & Implementation, Statistical Models, Statistical Methods, Statistical Inference for Data Science Teaching Assistantship: CS564 Database Management Systems	
PES University - Bengaluru, India	Aug 2019 – May 2023
Bachelor of Technology in Computer Science & Engineering	GPA - 3.78/4.00
Specialization: Machine Intelligence & Data Science Awards: MRD Scholarship (Top 20% of 1100+ students)	
Coursework: Algorithms, Data Structures, Data Science, Linear Algebra, Machine Learning, Big Data, Cloud Computing	
Teaching Assistantship: CS203 Statistics for Data Science	

WORK EXPERIENCE

Bosch Global Software Technologies (BGSW)	Bengaluru, India
Senior Software Engineer – AI Systems for Advance Driver Assisted Systems (ADAS)	Aug 2023 – Aug 2025
MLOps (ML in Operations) & Distributed Cloud Workflows	
<ul style="list-style-type: none">Delivered MLOps platform for pedestrian detection (Azure ML Studio + MLFlow) with end-to-end ML lifecycle; enabled multi-GPU training (3x faster) and cut GPU costs by 60%.Designed and scaled a Ray Cluster based distributed ML training system on Azure Kubernetes Service (AKS), reducing retraining cycles from 4 weeks to 1 week (75% faster) and supporting 30+ teams.Deployed an on-prem Ollama LLM with a Python FastAPI wrapper, enabling private, team-wide LLM access (150+ users) with zero external data egress.	
Large-Scale Image Retrieval & Dataset Generation for Autonomous Driving	
<ul style="list-style-type: none">Developed a 60M+ image-search engine using CLIP embeddings + ElasticSearch, enabling edge-case retrieval and cutting reviewer triage from 4 hours to 10 minutes (95% efficiency gain).Engineered scene-understanding image retrieval pipeline for fine-grained dataset generation: scene graphs (hugging face transformers + ensemble of foundation models) improving corner-cases for complex driving scenarios.	
Embedding Reuse & Cost Optimization	
<ul style="list-style-type: none">Integrated CLIP embedding re-use with 80% cross-version alignment, avoiding full re-indexing of legacy image vectors.Applied image-complexity estimation for cost-aware labeling, cutting annotation effort and labeling costs by 30%.Streamlined ML pipeline provisioning on AKS (Terraform, Helm, GitHub Actions, Argo) for multi-tenant ADAS teams; integrated Prometheus monitoring/alerting, and reduced experiment setup from 3 days to 5 minutes (99% efficiency gain) for 30+ teams.	
Machine Learning Operations (MLOps) Intern	Jan 2023 – May 2023 Jun 2022 – Jul 2022
<ul style="list-style-type: none">Built on-premise MLOps pipeline (DVC + MLflow), reducing model setup time from 1 Week to 1 Day, 85% faster.Accelerated multi-GPU training for YOLOv5 and Detectron2 on Azure ML Studio, reducing training time by 67%.	

TECHNICAL SKILLS

Programming languages: Python, C, C++, Java, SQL, R
ML & Statistics: PyTorch, TensorFlow, HuggingFace, Transformers, LLM, CNN, GAN, scikit-learn, OpenCV, matplotlib
MLOps & Workflows: Ray, MLFlow, DVC, Argo Workflows, Azure ML Studio, Prometheus, Grafana
Cloud: Azure, AWS, AKS, Docker, Terraform, Azure DevOps, GitHub Actions, Linux
Databases & Tools: ElasticSearch, PostgreSQL, MySQL, MongoDB, FastAPI, Flask, Streamlit, GitHub

PROJECTS AND PUBLICATIONS

- [1] **Code Runtime Complexity Prediction** - ERCICA (Springer), 2023 | Python, TensorFlow, sklearn, Streamlit, NetworkX Predicted Big-O runtime complexity of C/Java/Python code using static analysis and ML classification with BiLSTM over Abstract Syntax Trees graph embeddings on IBM CodeNet dataset (**Accuracy: 96%**). [[View Publication](#)]
- [2] **MLOps POC pipeline for Pedestrian Detection** - 2023 | Python, DVC, MLFlow, DAG, Streamlit, SQLite, PyTorch Implemented on-premise MLOps starter template with DVC + Detectron2 for end-to-end ML lifecycle. [[View Project](#)]
- [3] **Novel ways of decrypting transposition ciphers**, - IEEE smartgencon, 2022 | Python, Optimization, Natural Language Introduced cipher-breaking optimization techniques over columnar transposition ciphers. [[View Publication](#)]

AWARDS AND SERVICES

- Top Achiever Award & Best Presenter Award:** BGSW, 2024, Data Engineering Unit: Ranked **1st** among **150+** engineers
- Volunteer:** BGSW, 2023-2025, Trained people with disabilities (Youth4Jobs) and taught CS to underprivileged students.
- Teaching Assistant:** PES University, 2022, Mentored **120+** students in Data Science and served as a panelist in a hackathon.