



Mohamed Nazif

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My Portfolio • [linkedin.com/in/nazifmhd](https://www.linkedin.com/in/nazifmhd) • github.com/nazifmhd

Personal Summary

Motivated and responsible professional with a solid foundation in Machine Learning Engineering, Data Science, and Artificial Intelligence. Passionate about advancing my skills and knowledge in the tech industry, with a focus on developing innovative, data-driven, and AI-powered solutions. Currently seeking opportunities to apply my expertise in machine learning, artificial intelligence, data analysis, and predictive modeling while continuing to grow and contribute to impactful projects.

Technical Expertise

- **Programming Languages:** Python, R, SQL, C++
- **Artificial Intelligence & Machine Learning:**
 - **AI Techniques:** Reinforcement Learning, Knowledge Representation, Expert Systems
 - **ML Techniques:** Supervised & Unsupervised Learning, Regression, Classification, Clustering
 - **Deep Learning:** Neural Networks, CNNs, RNNs, Transfer Learning, GANs
- **Generative AI:**
 - **Techniques:** Text Generation, Image Synthesis, Code Generation, Style Transfer
- **ML Frameworks & Libraries:** TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy
- **Natural Language Processing:**
 - Text Preprocessing, Sentiment Analysis
 - Tools: NLTK, spaCy, Hugging Face Transformers, GPT-based models
- **Computer Vision:** OpenCV, YOLO, Object Detection, Face Recognition
- **Databases:**
 - **Relational:** MySQL, PostgreSQL
 - **NoSQL:** MongoDB
- **Cloud & DevOps:** AWS, GCP, Azure, Docker, Kubernetes
- **Development Tools:**
 - Version Control: Git, GitHub, GitLab
 - IDEs & Notebooks: Jupyter Notebooks, Google Colab, Anaconda
 - API Development: RESTful APIs, Flask, Django
- **Data Analysis & Visualization:**
 - Data Cleaning, Exploratory Data Analysis (EDA)
 - Visualization Tools: Matplotlib, Seaborn, Tableau, Power BI
- **Advanced Techniques:**
 - Time Series Analysis
 - Recommendation Systems
 - A/B Testing
 - Optimization: Gradient Descent, Hyperparameter Tuning
- **AI Ethics & Best Practices:**
 - Bias Detection & Mitigation
 - AI Model Interpretability

Education

- **University of Moratuwa**, Bachelor's of Information Technology (June 2022 – Present)
- **Institute of Technology, University of Moratuwa**, NDT in Information Technology (Dec 2022 – Present)
- **AL-Hira Maha Vidyalaya**, Physical Science Stream (2018 – 2020)

Certifications

- **Machine Learning Specialization** - DeepLearning.AI
- **Data Science with Python** - University of Colombo
- **PyData Workshop Series (Python & Data Science)** - PyData NYC
- **Postman Student Expert**

Projects

VisioSense - Smart Assistive Technology for the Visually Impaired (**Team Lead**)

- Engineered an innovative assistive technology solution that improved object detection accuracy by 85% for visually impaired users through smart sunglasses integration
- Implemented real-time video processing using ESP32-CAM, achieving 30 FPS streaming and <200ms latency in object detection
- Developed and trained custom YOLOv8 model to recognize 50+ common objects with 92% accuracy
- Reduced emergency response time by 70% through implementation of one-touch GPS-enabled alert system
- Architected cross-platform mobile application serving 100+ daily active users on both iOS & Android

Technical Implementation:

- IoT: Programmed ESP32-CAM microcontroller using C++ and Arduino IDE for efficient video capture
- Machine Learning: Trained YOLOv8 model on custom dataset of 10,000+ images
- Mobile Development: Built Flutter/Dart application with user satisfaction interfaces
- Backend: Implemented Firebase real-time database with 99.9% uptime
- Security: Integrated Gmail SMTP for secure OTP verification and user authentication
- Communication: Established MQTT protocol for reliable real-time data transmission

Machine Learning & Deep Learning

- **Chicken Disease Classification**
Developed a CNN model to classify chicken diseases from feces images, managing workflow setup, pipeline creation, and version control with DVC. Automated deployment on AWS via CI/CD with GitHub Actions, building Docker images for EC2 deployment. Streamlined poultry disease detection with continuous model updates on the cloud.
- **Text Summarizer with AWS**
Developed a text summarization pipeline using NLP techniques. The project included configuration management, pipeline creation, and deployment automation via CI/CD using GitHub Actions. Dockerized the application and deployed it on AWS EC2 with seamless integration of ECR for container management.
- **LLM Agents Using LangChain and OpenAI (Generative AI)**
- **LLM Conversational RAG Application (Generative AI)**
- **LSTM Sentiment Analysis IMDB Reviews**
- **Customer Churn Prediction**
- **Image Classification MobileNetV2**
- **Breast Cancer Classification with Neural Network**
- **Brain Tumor Segmentation**
- **Virtual Painter**

Foodie - Restaurant Management System

- Developed and launched restaurant management platform
- Increased order processing efficiency by 75% through automated order management
- Implemented secure payment gateway processing 500+ daily transactions
- Reduced customer wait time by 40% through streamlined ordering process

Technical Stack:

- Backend: PHP/CodeIgniter with RESTful API architecture
- Database: MySQL optimization handling 10,000+ daily queries
- Frontend: Responsive design using Bootstrap with 98% mobile compatibility

Console Applications

- **Python Billing System (Team Lead)**
- **Java Library Management System**

Extracurricular Activities

- **University Colors for Volleyball** - University Games 2024
- **Volleyball** - Qualified for Provincial Level (School Level, 2019)
- **Chess** - Qualified for Provincial Level (School Level, 2016, 2017, 2018, 2019)
- **Player** - Volleyball Team, University of Moratuwa
- **Coordinator** - Volleyball & Chess, Sports Club of ITUM (Present)

References

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|--|---|
| <ul style="list-style-type: none">• Mrs.A.U.P. Athukorala
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