Krishna Kewat

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Objective

Graduate student with strong foundations in data structures, algorithms, and end-to-end machine learning system development. Hands-on experience building reproducible deep learning pipelines using Python, PyTorch, and TensorFlow, addressing real-world challenges such as class imbalance, data leakage, and model evaluation. Interested in large-scale, low-latency ML systems and applied machine learning in production environments.

Education

- **University of Greenwich** — London, United Kingdom
  MSc in Computer Science; GPA: 2:1 — *Jan 2025- Jan 2026*
  Courses: *Machine Learning, Enterprise Software Development, Penetration Testing, Mobile Application Development*

- **Madanapalle Institute of Technology & Science** — Angallu, India
  B.Tech in Computer Science & Engineering; GPA: 8.53/10 — *July 2018 - July 2022*
  Courses: *Data Structures & Algorithms, Operating Systems, Artificial Intelligence, Machine Learning, Linear Algebra, Databases*

CORE TECHNICAL SKILLS

- **Programming Languages**: Python, C
- **Machine Learning & Deep Learning**: PyTorch, TensorFlow/Keras, CNNs, Transfer Learning, Model Training & Evaluation, Regularisation
- **Data & Pipelines**: NumPy, Pandas, Scikit-learn, SQL, Dataset Pipelines, Batch Processing
- **Systems & Tools**: : Linux, Git, Google Colab, Anaconda
- **Backend & Web (Supporting)**: : MySQL, HTML, CSS

Projects

- **End-to-End Medical Image Classification Pipeline using Transfer Learning (ResNet50)** — Github-Link
  MSc Final Project — University of Greenwich — *Jan 2025 - Present*
  - Designed and implemented a modular, end-to-end ML pipeline for multi-class image classification using Python and PyTorch.
  - Fine-tuned a ResNet50 transfer-learning model on the HAM10000 dataset (10,000+ dermatoscopic images, 7 diagnostic classes) with GPU-accelerated training.
  - Built data ingestion and preprocessing pipelines with strict train/validation/test separation to prevent data leakage.
  - Addressed severe class imbalance using oversampling and data augmentation (rotation, flips, colour jitter).
  - Achieved 84.5% test accuracy and 0.73 macro-F1, demonstrating stable generalisation on unseen data.
  - Implemented early stopping, learning-rate scheduling, and performance monitoring to improve convergence efficiency.
  - Conducted detailed error analysis using confusion matrices and precision-recall metrics to identify model failure modes.

  Technologies: Python, PyTorch, NumPy, Pandas, Scikit-learn

- **Multi-Class Plant Disease Recognition using Deep Convolutional Neural Networks**
  B.Tech Project — MITS — *Jan 2022 - July 2022*
  - Designed and implemented a deep learning-based image classification system to detect and classify plant diseases from leaf images.
  - Built a CNN model based on AlexNet architecture, leveraging transfer learning to remove reliance on hand-crafted features.
  - Trained and evaluated the model on a large-scale augmented plant disease dataset (38 classes) derived from ImageNet-style data.
  - Implemented a complete data preprocessing and augmentation pipeline including rescaling, zoom, shear, and spatial transformations.
  - Fine-tuned model performance by freezing and unfreezing convolutional layers during training.
  - Optimised training using SGD with momentum and categorical cross-entropy loss.
  - Evaluated performance using accuracy metrics, confusion matrices, and classification reports, validating robustness on unseen test data.

  Technologies: Python, TensorFlow/Keras, CNNs, AlexNet, NumPy, Pandas, OpenCV, Anaconda

Experience

- **Full Stack Developer Intern**
  WorksBot Private Limited — Remote *May 2022 – Aug 2022*
  - Contributed as a junior software engineer across frontend and backend components in a production web application.
  - Developed and maintained relational database schemas using MySQL, ensuring data consistency and efficient querying.
  - Built responsive frontend components using HTML, CSS, and JavaScript, integrating them with backend services.
  - Collaborated using Git-based version control and agile development workflows

DATA STRUCTURES & ALGORITHMS

- Strong understanding of arrays, strings, hashing, stacks, queues, trees, and recursion.
- Solid grasp of time and space complexity analysis.
- Actively practising algorithmic problem-solving for ML and systems interviews.

CERTIFICATIONS & CONTINUOUS LEARNING

- **Complete Machine Learning & Data Science: Zero to Mastery**: - Udemy
  - Covered end-to-end ML workflows including data preprocessing, exploratory data analysis, supervised and unsupervised learning, and model evaluation.
  - Hands-on experience with Python, NumPy, Pandas, Scikit-learn, and practical ML pipelines.
- **The Complete Web Development Bootcamp**: - Udemy
  - Built full-stack web applications using HTML, CSS, JavaScript, Node.js, Express, and SQL.
  - Strengthened understanding of client–server architecture, RESTful APIs, and backend integration.
- **GRE - 320/340**: Q - 167, V - 153, AWA- 3.5

Hobbies

- Reading Books
- Playing Games
- Travelling

PROFESSIONAL MEMBERSHIPS

- Member, Association for Information Science and Technology (ASIS&T)
- Member, International Association of Engineers (IAENG)

References

- Dr. Nuno Palmerio Otero, Email:N.R.PalmeiroOtero@greenwich.ac.uk
- Dr. Mahaboob Basha Shaik,Email:drmahaboobbashas@mits.ac.in