Komalpreet Kaur

AI/ML Engineer

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Objective

AI/ML Engineer passionate about building real-time intelligent systems through applied machine learning and deep learning research, with strong foundations in algorithms, statistics, and cross-functional collaboration.

Technical Skills

Languages: Python, Java, C++, Bash
Machine Learning & AI: Supervised & Unsupervised ML, Feature Engineering & Data Preprocessing
Deep Learning: CNN, Transfer Learning, Computer Vision, NLP Fundamentals
Frameworks and Libraries: Scikit-learn, TensorFlow, NumPy, Pandas, Matplotlib, Seaborn
MLOps & DevOps: Docker, Linux, Git, GitHub Actions, Model Deployment, CI/CD, Kubernetes Basics
Cloud Platforms: AWS, Azure
Data Engineering & Databases: SQL, NoSQL, Data Pipelines, Relational Data Modeling
Mathematical / Analytical Skills: Statistics, Probability theory, Linear Algebra, Calculus
Other technical skills: OOP, DSA, Agile/Scrum Development

Projects

Customer-churn-prediction *Python, Scikit-learn, Pandas, Matplotlib, Flask*
Machine learning model to predict customer churn for a telecom dataset

- Built an end-to-end ML pipeline with feature engineering and preprocessing for accurate churn detection.
- Optimized Logistic Regression and Random Forest models to maximize recall on churn cases.
- Deployed the trained model via Flask API for real-time churn prediction, improving churn recall by 18% in business-critical users

LungScan-CNN *Python, TensorFlow, TFLearn, NumPy, Pandas, SimpleITK, HDF5*
Deep learning model for automated lung nodule detection from CT scan slices

- Developed a CNN-based image classification system trained on LUNA16/LIDC-IDRI CT scan datasets for detection.
- Built a balanced training pipeline with augmentation and HDF5 batch loading for efficient model training.
- Achieved 93% accuracy, 89% precision, and 98% specificity with validated performance metrics.

Hospital Emergency Room Dashboard *Microsoft Excel, Power Query, Pivot Tables, Data Visualization*
Analytical dashboard for monitoring patient inflow, bed occupancy, and emergency response trends.

- Designed interactive charts and KPIs using Excel Pivot Tables and slicers.
- Automated data refresh and transformation with Power Query.
- Enhanced decision-making through real-time visualization of key hospital metrics.

Achievements & Hackathons

- Top 15 / 900+ in internal SIH 2025 Hackathon (selected for semifinals).
- Recognized in Dean's List – Top 10% of CSE batch at LPU.

Certifications

Social Networks (NPTEL) *2025*
Data Analytics Job Simulation (Deloitte) *2025*

Competitive Coding

LeetCode: 4 Badges | 250+ Problems Solved **HackerRank:** Gold Level (C++) | Silver Level (Python)

Soft Skills

Analytical Problem-Solving, Critical Thinking, Team Collaboration, Adaptability, Communication, Time Management

Education

B. Tech in Computer Science Engineering — Lovely Professional University *Expected 2027*
CGPA: **8.65**
Class 12 (CBSE): Shri Rajendra Giri Memorial Academy — **93%**
Class 10 (CBSE): Shri Guru Nanak Dev Public School — **96.2 %**

Note: Project links are embedded in project names.