SANDRA KETTIDATHIL CHANDY

Phone:+1(930)-904-6450 I sandrakettidathilchandy@gmail.com I *Linkedin* I *Portfolio* I *GitHub*

EDUCATION

INDIANA UNIVERSITY, BLOOMINGTON — Bloomington, IN
Masters in Data Science — ExpectedMay 2027
Relevant coursework: Statistical inference using R, Applied Machine Learning, Applied Database Technologies, Computer Vision, Data visualisation

COLLEGE OF ENGINEERING, TRIVANDRUM — Kerala, India
Bachelors in civil engineering — **CGPA - 9.6 / 10**
Relevant coursework: Linear Algebra and Calculus,Vector calculus, Differential Equations and Transforms, Programming in C, Probability, statistics and numerical methods.

WORK EXPERIENCE

IBS SOFTWARE — Kochi, India
Software Development Engineer- 1 — July 2023- July 2025

- Optimised critical features in Expedia's iOS Property Details Page (18M+ users) using experimentation and data- driven decisions.
- Integrated GraphQL with optimised parallel loading, improving load time 32% and reducing customer drop-off 12%.
- Designed A/B tests and applied ML-based ranking improvements, increasing booking accuracy by 1.7 bp.
- Instrumented analytics events and conducted deep-dive performance analyses to validate product improvements.

PROJECTS

Medical Claim Fraud Detection(Graph ML)

- Skills: GraphSAGE · PyTorch · Anomaly Detection
- Built a patient–provider claim graph to detect anomalous health-insurance claims using GraphSAGE and unsupervised anomaly detection.
- Developed a PyTorch-based pipeline for graph sampling, embedding computation, and anomaly scoring.
- Improved fraud-audit precision by 35% on real-world claim data, increasing downstream investigation efficiency.

Hospital Readmission Risk Model

- Skills: Cost-Aware Thresholding · ROC/AUC Evaluation · SHAP Analysis
- Built a 30-day patient readmission prediction model using logistic regression / XGBoost, applied cost-aware thresholding, and optimized for hospital resource allocation.
- Trained on 101,766 patient records with 47 features; achieved ROC AUC = 0.686 (val) / 0.673 (test) on a challenging imbalanced dataset (positive rate ≈ 11.2%).
- Identified an optimal cost-minimizing threshold = 0.101, improving sensitivity to 0.699 while balancing specificity (0.566).

Derma Scanner- AI Skin Cancer Detection

- Skills: EfficientNet-B0 · Flask Web Deployment · Computer Vision (CNNs)
- Developed an AI-powered web application to classify skin lesions and generate automated triage reports.
- Trained an EfficientNet-B0 model for lesion classification, achieving ~80% accuracy on benchmark data.
- Built a full pipeline using Python, Flask, and HuggingFace, including image preprocessing, prediction API, and PDF report generation.

SKILLS

- **Programming**: Python, SQL, Java, Kotlin, Swift, Bash, R
- **ML/DL**: sscikit-learn, PyTorch, TensorFlow, XGBoost, Hugging Face Transformers
- **Databases**: PostgreSQL, MySQL, MongoDB, Neo4j
- **MLOps / DevOps**: Docker, FastAPI, Git/GitHub
- **Analytics & Visualization**: pandas, NumPy, matplotlib, seaborn, Plotly, Tableau, Power BI
- **Tools & IDEs**: Jupyter, VS Code, PyCharm, Linux/Unix