

Rissi Kumar Prabhakaran

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EXPERIENCE

Data Scientist Intern

Great Falls, Virginia

Kashmir World Foundation

- Developed machine learning pipelines to analyze 10,000+ hours of rainforest audio data, improving species vocalization detection accuracy by 2% using Mel spectrogram and MFCC-based models.
- Analyzed ecological audio patterns, reducing manual data processing time by 38%.
- Preprocessed 3,000+ bioacoustic samples using Label Studio and Audacity, accelerating model training performance by 29%.

AI Engineer

Bengaluru, India

Vlog Innovations

- Implemented a physician interpreter model (PIFA) that summarizes patient records and answers queries by fine-tuning BERT on domain-specific medical Q&A data.
- Designed a job hunt engine for the disabled community in the
- Built an SOS system in Audire [🔗](#) using autoencoders for anomaly detection, increasing response effectiveness by 17%.

EDUCATION

Masters in Data Science

08/2024 – 05/2026

University of Colorado Boulder

Boulder, Colorado

GPA: 3.6/4

Bachelor of Technology in Artificial Intelligence and Machine Learning

06/2020 – 05/2024

Anna University

Chennai, Tamil Nadu

CGPA: 8.4/10

TECHNICAL SKILLS

Languages — Python, R, C, SQL, NOSQL-MongoDB

Technologies/Frameworks — Cloud - (AWS & Azure), ETL Operations, Snowflake, Agile, Microsoft Office Suite(Excel & Powerpoint), Dashboarding(PowerBI & Tableau), Flask, Docker, LLMs, Generative AI, Version Control(Git), Data Analytics, Business Understanding, Market Research Analysis, Risk Analysis, Data Modeling, Data Mining, Predictive Modeling, Statistical Analysis

Certifications — Machine Learning - LemaLabs

PROJECTS

Task Insights and Workload Overview Analysis for Denver International Airport [🔗](#)

- Engineered a Model to monitor task insights and workload distribution for DEN employees' operational needs.
- Deployed dashboards in PowerBI, enabling users to interact with real-time performance metrics, saving 15 minutes per analysis.

Fire in Focus: A Deep Learning Approach to Analyzing Wildfires [🔗](#)

- Automated a ML model to predict wildfire occurrences in Southern California using geospatial and temporal data features.
- Achieved 83.5% classification accuracy using Random Forest and an AUC-ROC of 9% with XGBoost.

Spatiotemporal-Deep-Learning-for-High-Resolution-Flood-Mapping [🔗](#)

- Pioneered hybrid DL models (LSTM + DeepLabv3+, GRU + U-Net++) to segment urban flood masks using rainfall time series and geospatial layers for Houston.
- Attained a test Dice score of 57.3%, with morphological post-processing improving edge quality and delivering a 12% IoU gain.
- Tuned model hyperparameters using Bayesian optimization using Optuna, reducing validation loss by 9.6% over baseline

PUBLICATIONS

Smart Fields: Enhancing Agriculture with Machine Learning [🔗](#)

Published in the Proceedings of the 2nd International Conference on AI and ML Applications (AIMLA 2024), under the theme Healthcare and Internet of Things, IEEE Xplore.

LEADERSHIP ACTIVITIES

Enactus Club

08/2021 – 08/2023

The Marketing Associate

Contributed to project "IKEBANA", which won the TNSI Award and a cash prize of 1 lakh.

Innoventzz

08/2022 – 05/2024

The Overall Coordinator

Launched and led INNOVENTZZ 2022 and INNOVENTZZ 202, the inaugural symposium for AIML department.