

Vidyashree Rayar

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Languages: German B1, English C1, Kannada C2

Profile Summary

AI Master's student specializing in Computer Vision (Python, PyTorch) with industry experience in SAP BI, Power BI, and data analytics. Proven in end-to-end project execution, including optimizing BI reports (+15 sales reports) and developing Computer Vision models (e.g., +4 percent accuracy in facial expression recognition). Fluent in English, intermediate German (B1), and skilled in cross-functional collaboration.

Technical skills

- **AI & Machine Learning:** CNNs, Attention Mechanisms (CBAM), Transfer Learning, Clustering (K-means, DBSCAN), Vector Mathematics (Euclidean/Manhattan Distance, Dot Products), Model Evaluation (Accuracy, F1-score, Confusion Matrix), Hyperparameter Tuning
- **Computer Vision & Spatial Analysis:** Depth Map Generation, 3D Pitch Estimation, 2D Image Processing, Feature Extraction, Pattern Recognition, Anomaly Detection (basic)
- **Data Integration & Tools:** AWS S3, PostgreSQL, OData, SAP CDS Views, Power BI
- **Programming & Data Processing:** Python, SQL, NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Keras, Git

Projects

3D Depth-Aware Solar Panel Pitch Prediction

[Github Repo](#)

- Achieved ± 10 percent accuracy in 3D pitch prediction from satellite imagery using a Python pipeline for depth map generation and spatial analysis. This pipeline, built with PyTorch and TensorFlow, integrated the digital twin simulation principles for renewable energy analytics.
- Tools & Skills: VSCode, git, github, Python, Tensorflow, PyTorch, matplotlib.

Enhancing facial expression recognition in music systems with CBAM

[Github Repo](#)

- Boosted FER-2013 accuracy by 4% using CBAM attention mechanisms, transfer learning, and PyTorch, evaluated with confusion matrices and F1-scores. Built a real-time pipeline with OpenCV for face detection and preprocessing, leveraging Google Colab for GPU training and Pandas for data handling.
- Tools & Skills: Python, PyTorch, Scikit-learn, Pandas, OpenCV, Google Colab, Git, GitHub

Mandatory Internship

EnterpriseMindFactory - Mainz, DE

01/11/2023 – 28/02/2024

Optimizing Credit Insurance Insights with Power BI and SAP CDS View Approach

- Engineered and automated the credit insurance analytics pipeline by developing 5+ SAP CDS Views to consolidate data from 7-10 underlying SAP tables, transforming 10,000+ client records into a dynamic Power BI dashboard that refreshed in under 5 minutes, replacing manual processes and enabling data-driven risk assessment.
- Tools & Skills: Power BI, SAP CDS Views, SAP OData

Work Experience

Working Student - AI & Power BI

01/11/2023 – 30/09/2024

EnterpriseMindFactory – Mainz, DE

- Ensured faster access to critical data by automating the CSV-to-S3 pipeline, simplifying the ETL process
- Engineered a dynamic Power BI reporting system, reducing SAP report volume by 80 percent, and enabling seamless cross-landscape analytics for business users.

- Improved profitability analysis by implementing drill-through functionality in Power BI, saving users 5-10 minutes per session.
- Centralized analysis of SAP COPA and inventory data by designing 3 Power BI reports using SAP CDS views and OData. This provided a single source of truth for business analysis.

Self-Employed

11/03/2019 – 08/09/2022

Freelancing – Bengaluru, IN

- Enhanced AI model performance by delivering precise multilingual dataset annotations for text classification and pattern recognition
- Applied analytical problem-solving to HR B2B operations in Amazon's US fulfillment centers
- Earned Goethe-Zertifikat B1 in German

SAP BI Analyst

01/01/2015 – 31/12/2018

Wipro Technologies – Bengaluru, IN

- Optimized 15+ BI sales reports by redesigning data structures, improving reporting performance by over 30 percent
- Published a whitepaper on SAP BO Webi reporting concepts for the benefit of the team
- Collaborated with UK and India teams across the full project lifecycle, from requirements to post-production during onsite tenure
- Ensured data accuracy and compliance by documenting and testing 100+ SAP BI reports, contributing to successful audits in a high-regulation healthcare environment
- Received Inspiring Performer Award from GSK London for leading and delivering 14 technical test cases on time under heavy deadlines, earning high client praise
- Recognized on the Wall of Fame for revamping critical documentation and delivering on time in a high-compliance healthcare project

Education

Brandenburgische Technische Universität

15/10/2022 – Present

MSc in Artificial Intelligence

- Coursework: Computer Vision, Deep Learning, AI Agents, Machine Learning

Birla Institut of Technology and Science

01/04/2011 – 31/10/2014

MTech in Software Engineering

- Coursework: DBMS, Mathematics, Operating Systems, Statistics, C++

Courses and Certifications

Languages: Goethe-Zertifikat B1 — Goethe Institut Indien, IELTS C1 (Advanced)

Technical: Prompt Engineering: How to Talk to AIs - LinkedIn Learning, Top 10 Skills for NLP Specialists - LinkedIn Learning