

Surya Samarth Jagadish

Philadelphia, Pennsylvania

www.linkedin.com/in/suryasamarthJ/ | <https://github.com/samj2199>

Web: suryasamarth.com | sj3244@drexel.edu | Ph : +1 (267) 881-3697

SUMMARY

A Data Scientist specializing in optimization and efficiencies across healthcare, automotive, and retail sectors by leveraging Deep Learning(AI/ML) techniques to optimize workflows, enhance revenue predictions, and improve classification, while collaborating with cross-functional teams and executives.

EDUCATION

DREXEL UNIVERSITY - Master of Science in Computer Engineering

Core Courses: Applied Machine Learning, Data Visualization, Database Management Systems, Pattern Recognition

Sep 2022 - June 2024
Philadelphia, PA

PRESIDENCY UNIVERSITY - Bachelor of Technology in Computer Science

Core Courses: Data Structures, Machine Learning, Internet of Things

Aug 2018 – Mar 2022
Bangalore, India

EXPERIENCE

DREXEL UNIVERSITY , COLLEGE OF COMPUTING & INFORMATICS

Data Science Researcher

Project - Acoustic Scene Classification [Circor Heart-Sound (with Murmurs) Audio Dataset]

- Deployed a combination of CNNs and SVMs, achieving 87%, 79% accuracies respectively for normal vs abnormal heartbeat sounds, reducing murmur misclassification by 18%
- Optimized noise reduction and feature extraction using STFT, wavelet transform, EMD and MFCCs, enhancing audio clarity and isolating key features for accurate murmur analysis

Philadelphia, PA
Sept 2023 – Dec 2023

Data Scientist

Project – Digitization of Diatom Samples

- Managed Docker containers and deployed DataFed and Globus instances for metadata-driven storage solutions
- Assisting with research for designing, implementing, and testing the storage adapter from Globus to DCS Storage

Oct 2024 – Present

ANMERKUNG SOLUTIONS PRIVATE LIMITED (AUTOMOTIVE SECTOR)

AI/ML Engineer

- 2D Annotation tool development
 - Oversaw R&D initiatives to fine-tune MobileNet and YOLO for an in-house 2D annotation tool to semi-automate the annotation of vision-based data for autonomous driving
 - Collaborated with a 6-member team, focusing on backend development using Django and Python to manage data handling and API integration for tool development
- Sign Board Detection
 - Leveraged expertise in developing a custom neural network for signboard detection among Indian roads, annotating 3000 images across 10 signboard classes
 - Achieved an 85% accuracy by optimizing the neural network layers, focusing on true-positives and true-negatives to streamline annotation and reduce manual corrections
- GD&T Symbol Recognition
 - Accomplished 90% accuracy on the development of an OCR tool capable of detecting GD&T symbols in 2D mechanical drawings through collaborative efforts

Bangalore, India
Mar 2022 – Aug 2022

Data Visualization & Analysis Team

- Quality Control Feedback Loop
 - Created an interactive Power BI dashboard to monitor annotation quality using a feedback loop, highlighting error types, thereby improving daily performance of annotator
- Object Detection
 - Trained on an OEM proprietary annotation tool using precise bounding boxes and segmentation to curate high-quality training data for autonomous driving algorithms
 - Applied AI/ML techniques to derive ground truth data, improving model accuracy and boosting the KPI index by 2% for German based OEMs
- High Beam Assist
 - Derived the blockage percentage and visibility threshold key point using ground truth data for vehicle ADAS, in turn reducing the algorithm's delay in response

Mar 2021 – Aug 2021

WEEZY STREETWEAR (RETAIL SECTOR)

Freelance Data Analyst

- Supply-Chain Analysis
 - Reduced overstock by 30% through trend analysis and inventory optimization, enhancing inventory management
 - Developed a dynamic supply chain model that balanced demand and supply, resulting in an inventory turnover of 30 days
- Funnel optimization [Product Listing Page(PLP) to Product Detail Page(PDP)]
 - Boosted add-to-cart rates by 1.2% and improved final conversion rates by 0.3% by identifying key drop-off points and implementing targeted discount strategies

Bangalore, India
July 2021 – Apr 2022

PROJECTS

SIMULATION OF HAPTIC FEEDBACK GLOVE FOR GUITARISTS (Jan 2024)

- Conceptualized a theoretical AI-integrated haptic glove using ROS/Gazebo for simulations, XGBoost and KNN to explore improvements in guitar learning accuracy

SIMILARITY DETECTION OF MUSIC COMPOSITIONS (Sept 2023)

- Designed a model to analyze and ensure distinctiveness in music compositions using audio feature extraction and ML techniques, potentially aiding in reducing copyright risk
 - Main libraries: Librosa, OpenSmile, TensorFlow, XGBoost

GENRE CLASSIFICATION IN MUSIC (Oct 2022)

- Engineered an XGBoost-based model to classify sub-sections of audio into genres using Mel Spectrograms, significantly aiding in detailed genre analysis with the GTZAN dataset
 - Main libraries: Librosa, TensorFlow, XGBoost

CORE SKILLS

- Languages:** Python (Pandas, Seaborn, NumPy), C++/C, MATLAB, Java/JavaScript, HTML
- Deep learning:** TensorFlow, Keras, PyTorch, Scikit-Learn
- Databases:** MySQL, SQL(Oracle)
- Tools:** Tableau, Power BI, Orange, MS office, MS Visual Studio

CERTIFICATIONS & AWARDS

- Dean's List Fellowship award, Drexel University, Philadelphia, PA – 6 Semesters
- CITI Conflicts of Interest- IRB/ Research Administration COI – Attained proficiency in ethical data collection by identifying and managing conflicts of interest
- Human Subjects Research- IRB/ Research Administration - Trained in ethical and regulatory standards for responsible human-centered research and data collection
- Extra-curricular : State level Basketball, Signed Artist (Guitarist/Vocalist), Freelance Videographer/ Editor