DEVADARSHINI JAYAMURUGAN

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING ENGINEER
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SUMMARY

AI/ML Engineer with hands-on experience in Natural Language Processing, Computer Vision, Generative AI, and Cybersecurity. Skilled in developing and deploying scalable AI solutions, including speech-to-text, text-to-speech, and AR-powered training tools. Adept at collaborating across teams, applying cutting-edge models (LLMs, Whisper, HuggingFace, PyTorch) to real-world problems, and delivering measurable impact. Recognized for adaptability, problem-solving, and continuous learning, with strong academic and project-based achievements.

WORK EXPERIENCE

AI/ML Intern, VizExperts (Remote) **Feb 2025 – Jul 2025**

- Spearheaded AI-driven automation for training workflows using Computer Vision & NLP.
- Developed Flask-based web application automating extraction of Learning Objectives (LOs), SOPs, and Storyboards from multimedia sources.
- Integrated Whisper ASR & Coqui TTS for multilingual narration, achieving 85%+ transcription accuracy in noisy environments.
- Built video segmentation pipeline for scene detection & AR storyboard generation, cutting manual effort by 70%.
- Optimized AI models for object detection & image labeling to enhance industrial training content.

AI & Data Analytics, AICTE (Virtual) **Feb 2025 - Mar 2025**

- Designed and deployed a Flask-based NLP chatbot handling 100+ intents with 90%+ accuracy.
- Reduced average response time by 40% through optimized intent classification and entity extraction.

EDUCATION

Bachelor of Technology in Artificial Intelligence and Data Science **Oct 2021 - Nov 2025**
Saveetha School of Engineering, India **CGPA: 3.54 / 4.0**

- Research: “Comparative Study on Tomato Disease Detection using CNNs & PCA DeepNet”
- Key Courses: Deep Learning, NLP, Computer Vision, Cloud Computing, Generative AI, Machine Learning

HSC in PCMB **Graduated 2021**
Sindhi Model Senior Secondary School **82 %**

PROJECTS

Research Paper: Tomato Disease Detection Using VGG16 Over PCA DeepNet to Improve Accuracy | Link **Jul 2025**
Developed a hybrid deep learning and classical ML model combining PCA-based feature extraction, VGG16, and GAN-augmented dataset for tomato leaf disease classification and detection. Integrated with Faster R-CNN, the pipeline achieved 99.60% classification precision, 98.04% average accuracy, and a 0.94 IOU score

Resume ATS Checker | Link **Apr 2025**

An AI-powered Resume ATS Checker using OpenAI GPT-4 to analyze resumes against job descriptions and suggest improvements.
Enabled real-time match scoring, keyword extraction, and formatting feedback to optimize resumes for applicant tracking systems.

Book Recomendation System | Link **Aug 2024**

The project utilizes collaborative filtering and content-based algorithms to suggest books based on user preferences and reading history. By analyzing ratings, genres, and other features, the system provides personalized book recommendations to enhance the user's reading experience.

Image Color Palette Generator Using KNN | Link **Jul 2024**

The project focuses on extracting the dominant colors from an image by using the K-Nearest Neighbors (KNN) algorithm. This involves clustering the image pixels based on their color values to identify the most representative colors

Rainfall Prediction Using XGBoost | Link **Jun 2024**

Developed a model to predict rainfall using the XGBoost classifier, analysing various weather features for accurate classification. Evaluated model performance with metrics including ROC-AUC, precision, and recall, using techniques like data normalization and oversampling to handle imbalanced data.

Tomato Disease Detection: A Comparative Study | Link **May 2024**

Conducted a comprehensive research analysis comparing the performance of VGG16, InceptionV3, Inception ResNetV2, and Inception ResNet152V2 architectures for Tomato disease detection.

Helmet & Number Plate Recognition using YOLO V3 | Link **Apr 2024**

Developed a robust computer vision system utilizing YOLOv3 for real-time detection of helmets and number plates in images and video streams. Trained the YOLOv3 model on custom datasets containing annotated images of helmets and vehicle number plates, achieving high detection accuracy by integrating the system with a user-friendly interface for easy deployment and usage, providing real-time feedback on detected objects and their positions.

SKILLS

Programming & Languages: Python, R, SQL, HTML5
Machine Learning & AI: ML/DL (SVM, KNN, Decision Trees, Random Forest), Neural Networks (CNN, RNN, LSTM, GAN), Generative AI (Prompt Engineering, LLM Fine-Tuning), NLP (Transformers, Text Summarization), Computer Vision (YOLO, OpenCV, Faster R-CNN, Object Detection & Tracking)
Frameworks & Tools: TensorFlow, Keras, PyTorch, Scikit-Learn, XGBoost, Pandas, NumPy, Matplotlib, Seaborn, Flask, FastAPI, Git/GitHub, Colab, Linux, Python-pptx, Nextcloud API
Cloud & Platforms: Google Cloud Platform (GCP), Nextcloud, GPU & Cloud Model Deployment, API Development
Cybersecurity: Ethical Hacking, Threat Intelligence & Hunting, Vulnerability Assessment, IAM, Cryptography, Cyber Forensics, Wireshark, Nmap, Burp Suite, Metasploit, Splunk
Data & Analytics: SQL, Data Modeling, Query Optimization, Tableau, Power BI, MS Excel, Data Visualization
Soft Skills: Problem Solving, Critical Thinking, Attention to Detail, Teamwork, Project Management, Communication, Adaptability, Continuous Learning

CERTIFICATIONS

- **EC-Council:** Certified Ethical Hacker (CEH), Certified Threat Intelligence Analyst (CTIA v2)
- **Cambridge English:** Advanced (C2 Proficiency) – 2022
- **Google Cloud Platform:** Responsible AI, Generative AI Fundamentals, Image Captioning Models, Transformer & BERT, Scaling with Cloud Operations
- **Microsoft Azure AI Fundamentals:** Generative AI, NLP, Computer Vision, Azure OpenAI Service
- **Cisco SkillsForAll:** Python Essentials, Data Analytics Essentials, Intro to Data Science
- **Great Learning:** Advanced Cybersecurity, AWS, Cloud Computing, Cryptography
- **Other:** HackerRank (Python, SQL, Go), Microsoft Copilot Foundations, Tableau (Chegg), Excel for Data Analytics

VIRTUAL EXPERIENCES

- **BCG** – GenAI Financial Chatbot (AI-powered insights from 10-K/10-Q reports)
- **Deloitte & Tata iQ** – AI-driven financial analytics & collections strategy (EDA + predictive modeling)
- **Accenture North America** – Data Analytics & Project Management simulations
- **Cognizant** – Data Science (EDA, ML model development for retail datasets)
- **Mastercard** – Cybersecurity awareness & phishing detection
- **Commonwealth Bank** – Data Science & Cybersecurity (fraud detection, Splunk dashboards)
- **British Airways** – Data Science simulation (customer review scraping, predictive modeling)
- **Siemens Mobility** – Project management & KPI dashboard simulation
- **Electronic Arts (EA)** – Product Management (KPI selection for gaming strategy)
- **ANZ, Datacom, Tata Consultancy** – Cybersecurity IAM, incident response, risk assessment

AWARDS & ACHIEVEMENTS

- **Best Student Award – 2024**
- **Best Open Resource Learner Award – 2025**

LANGUAGES

- **English: C2 (Cambridge Certified, Proficiency)**
- **Hindi: B1 (Intermediate)**
- **Tamil: Native/Fluent**
- **Telugu: Conversational**

LEADERSHIP / EXTRACURRICULARS

- **Organized AI/ML workshops at university, mentoring 30+ peers on ML model deployment.**
- **Volunteered in cybersecurity awareness campaigns (2024).**

CONTACT