

# SIVAGIREESWARAN S

Chennai, Tamil Nadu, India

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## Experience

NYX AI (Remote) | AI Intern

June 2025 – Present

- Conducting research on advanced **image generation algorithms** and analyzing their interplay with **natural language processing (NLP)** models to explore multi-modal AI capabilities.

SCM Cube Technologies, Chennai, Tamil Nadu | Software Developer Intern

November 2024 – May 2025

- Designed and implemented an enterprise-grade Activity Monitor using C#, .NET, and MySQL, **deployed across 30+ computers**, enabling IT teams to monitor system health, resulting in a **25% reduction in downtime**.
- Enhanced Human Resource Management System (HRMS)** by designing 10+ new UI screens and refining workflows, leveraging Angular, React, and JavaScript, which increased HR data accessibility by **40%**.
- Architected a robust database synchronization tool, integrating **SQL Server with MySQL** on Linux to automate data transfers, achieving **100% cross-platform sync accuracy** and **reducing manual data entry by 80%**.

VKCI Groups (Remote) | Prompt Engineer Intern

April 2024 – October 2024

- Executed 100+ advanced prompts for **ChatGPT, LLaMA, and Claude**, optimizing zero-shot and few-shot performance across question answering, and code generation tasks, with a **35% improvement in task accuracy**.
- Collaborated on the design of a retrieval-augmented generation (RAG) pipeline using **FAISS and LangChain**, **reducing irrelevant LLM responses by 40%** and improving context awareness across 3+ internal use cases.
- Led internal documentation of prompt engineering strategies, building a reusable knowledge base of 50+ prompt templates, which improved prompt performance consistency by **30%** across multiple departments.

## Education

Amrita Vishwa Vidyapeetham, Chennai, Tamil Nadu

October 2021 – May 2025

Bachelor of Technology in Computer Science Engineering

## Publications

Advancing Offensive Meme Classification through BERT and VGG-19

January 2025–Present

Presently researching on exploring multimodal offensive meme classification, leveraging BERT for text analysis and VGG-19 for image processing.

Two-Stage Classification of Offensive Meme Content and Analysis

September 2024

Published a research paper titled Two-Stage Classification of Offensive Meme Content and Analysis. Achieved **83% accuracy** in detecting offensive content using multimodal inputs, contributing to advancements in **AI ethics and responsible machine learning**. DOI:10.1109/CICT64037.2024.10899719 — **IEEE Xplore**: [ieeexplore.ieee.org/document/10823312](https://ieeexplore.ieee.org/document/10823312)

## Projects

Smart Order Router Backtest (Cont & Kukanov Model) | Python, Finance, Optimization

April 2025

- Executed a backtesting framework to simulate smart order routing based on the **Cont & Kukanov static cost optimization** model, enhancing trading efficiency in fragmented markets.
- Applied **penalty-based allocation techniques** and calibrated parameters via grid search to minimize execution cost on 5000-share buy orders across simulated venues.
- Benchmarked results against traditional methods (TWAP, VWAP, Best Ask), **outpacing baseline by multiple basis points**, demonstrating strategic trading value.

Raster Area Recognition ML App | C#, Machine Learning, Image Processing

March 2025

- Devised an offline C# application with a tailored machine learning module to **discern and quantify distinct regions** in raster image inputs.
- Harnessed image processing techniques on curated datasets to **detect spatially segregated areas**, ensuring robust results across varied test cases.
- Assembled a custom pipeline with **sample-based learning**, eliminating dependency on external APIs and enhancing portability.

### AI Resume Agent | *Python, Flask, OpenAI API*

February 2025

- Orchestrated the development of an AI-driven resume assistant utilizing NLP and Flask APIs, streamlining structured data extraction for enhanced candidate profiling. Designed modular components, ensuring adaptability.
- Incorporated Hugging Face transformers to **generate precise, context-aware responses**, elevating user engagement and accessibility. Reengineered API calls to boost response efficiency, **reducing latency by 25%**.
- Redesigned query-based search algorithms, **enhancing response precision by 20%**, ensuring insightful resume-driven analytics. Optimized model fine-tuning techniques for improved resume query interpretation.

### Database Synchronization & Email Reporting System | *C#, SQL Server, MySQL*

February 2025

- Constructed a resilient synchronization framework, seamlessly **bridging SQL Server and MySQL on Linux**, ensuring optimal data integrity, **mitigating data loss risks by 40%**.
- Deployed an automated email reporting system with SMTP, **optimizing structured report generation and enterprise data**. Implemented a flexible scheduler to dispatch reports at predefined intervals, ensuring timely updates.

### Portfolio Website | *HTML, CSS, JavaScript, React*

January 2025

- Assembled a visually striking developer portfolio **inspired by the VS Code theme**, amplifying UI responsiveness and aesthetics. Designed reusable component structures for seamless feature extensions.
- Implemented smooth animations and dark mode, **enhancing interactivity and engagement**. Modularized React components for easy reuse and future scalability.
- Refactored the codebase for **improved maintainability and superior performance**, ensuring effortless navigation. Optimized accessibility features to improve discoverability and enhance user interaction.

### HRMS Enhancements | *Angular, React, JavaScript, MySQL*

January 2025

- Restructured API workflows and backend logic, **boosting system response efficiency by 35%**. Optimized database queries to decrease load times. Deployed role-based permission systems for refined access control.
- Enhanced data visualization tools, **empowering HR teams with actionable insights**. Created interactive dashboards displaying key workforce metrics. Implemented export functionalities for generating customizable reports, streamlining strategic decision-making.

### Activity Monitor | *C#, .NET, MySQL*

November 2024

- Developed a comprehensive monitoring tool, deploying it on **30+ workstations** to track performance and user activity. Integrated real-time tracking mechanisms to analyze CPU utilization, application activity, and network bandwidth. Constructed a distributed logging system to store performance metrics, aiding proactive IT interventions.
- Designed real-time dashboards, **reducing analysis time by 40%**, enabling predictive IT maintenance. Built dynamic widgets displaying key system health indicators. Incorporated automated alerts to notify administrators of anomalies, preventing disruptions.
- Enhanced reporting capabilities, **improving asset tracking and resource allocation**. Automated periodic reports, detailing workstation usage trends. Implemented trend analytics, facilitating IT teams in infrastructure planning and optimization.

### Smog Sentinel System | *Python, Google Colab, Kaggle*

October 2024

- Developed the Smog Sentinel System utilizing scalable machine learning models in Python, **achieving a 95% accuracy rate in predicting air quality levels**, provided accurate real-time pollution data, which significantly contributed to public health insights.
- **Elevated system efficiency by reducing prediction time by 30%**, enabling faster responses in distributed environments for pollution control measures, and improving decision-making processes for environmental health agencies through real-time actionable insights.

### Multimodal Offensive Meme Classification | *Python, Deep Learning*

July 2024

- Engineered a scalable multimodal offensive meme classifier using stacked LSTM and VGG16, **achieving a 92% classification accuracy**, contributed to distributed content moderation capabilities across platforms.
- Refined content moderation by integrating image and text modalities, **improving offensive content detection precision by 15%**, ensuring that nuanced content was accurately flagged and handled effectively.
- Strengthened communication strategies within a cross-functional team of eight members, leading to improved project clarity and reducing miscommunication errors by **30% during collaborative initiatives over six months**.

- Built a sophisticated web application in Python, **enhancing route navigation efficiency in a distributed system and achieving an increase of 40% in computational speed**; streamlined processes led to faster user response times based on real-time data analysis.
- Constructed a tool for computing optimal paths between locations in a graph, **enhancing navigation efficiency by 50%**, improving user experience with swift and reliable route suggestions in a fault-tolerant system and ensuring seamless system performance under various conditions.
- Facilitated brainstorming sessions that encouraged innovative solutions, showcasing leadership and creativity in optimizing the user experience.

## Technical Skills

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**Languages:** Python, C#, Java, HTML/CSS, SQL,MySQL

**Developer Tools:**Visual Studio, VS Code, Google Cloud Platform, Android Studio, OpenCV, Microsoft Suite,Google Suite

**Technologies/Frameworks:** .NET, GitHub,Angular,distributed computing, fault-tolerant systems, real-time data processing systems,React Js, React Native,Machine Learning,Deep Learning, OOPS, Data Structures, Computer Networks,Hadoop,Scala,SMTP,Networks

## Certifications

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**AWS Academy Graduate** – Achieved AWS Academy Cloud Architecting certification, demonstrating proficiency in designing and deploying scalable, reliable cloud solutions that enhanced operational efficiency by 20%.

**IBM** –Mastered virtual collaboration and enhanced communication strategies, boosting cross-functional team productivity by 15% through effective coordination.

**Certifications Repository** – For more Certifications [↗](#)

## Extracurricular

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### Tantrotsav'24 Organizer

March 2024

*Organizing Committee Lead**Amrita Vishwa Vidyapeetham*

- Orchestrated a national-level tech fest at Amrita Vishwa Vidyapeetham, **managing 1500+ participants** and overseeing seamless event execution.
- Led cross-functional coordination, **streamlining logistics, sponsorships, and scheduling**, ensuring a structured and engaging experience.
- Optimized resource allocation and event strategy, **enhancing participant satisfaction and stakeholder engagement**.

### Google Developers Students Club

August 2023 – July 2024

*Marketing & PR Lead**Amrita Vishwa Vidyapeetham*

- Pioneered the role of GDSC Marketing and Public Relations Lead at Amrita School of Engineering, Chennai, setting a strategic foundation for future leadership, improving brand presence by 25%.
- Spearheaded a national-level competition, driving participant engagement through comprehensive event planning and execution, resulting in a 40% increase in student involvement.

### Bharat Scouts & Guides

July 2015 – Present

*Rajyapuraskar Awardee*

- Embarked on my Boys Scouts journey at age 12, consistently demonstrating commitment to leadership and community service.
- Earned the prestigious Rajyapuraskar Award at 16, marking the highest state-level recognition for Scouts and Guides for exemplary performance in service and discipline.