# Sudarshan R. Hegde

+91 8431858299 | sudohegde@gmail.com | LinkedIn | GitHub | Portfolio website

## CAREER OBJECTIVE

Highly motivated and detail-oriented Computer Science Engineering student with strong foundations in data structures and algorithms. Proficient in C++, Java, Python, and modern web technologies, with a passion for applying machine learning and AI to solve real-world problems, with a focus on continuous learning and impactful contributions.

## TECHNICAL SKILLS

- **Languages:** C++, C, Java, Python, JavaScript
- **Frontend:** HTML, CSS, React, Tailwind CSS
- **Backend:** Node.js, Express.js
- **Cloud/DevOps:** AWS, Azure, Google Cloud, Jenkins
- **Data Science/ML:** TensorFlow, PyTorch
- **Databases:** MySQL
- **Tools:** Git, VS Code, PyCharm, LaTeX
- **Systems:** Ubuntu, Linux, Windows, Maven, Gradle

## WORK EXPERIENCE

**Software Developer Intern, Heartiest Mind Technologies Pvt Ltd** *Jan 2026 - Present*

Focused on the full software development lifecycle, I contribute to the design, testing, and deployment of scalable applications. I collaborate with cross-functional teams in an Agile environment to build robust features, optimize system performance, and implement clean, efficient code to meet client-specific requirements.

**Artificial Intelligence with Cloud Computing Internship, SuprMentr Technologies Pvt Ltd** *Jan 2026 - Present*

Focused on developing and deploying AI models within cloud-native environments, I leverage scalable infrastructure to optimize performance and cost-efficiency. I collaborate on architecting automated data pipelines and integrating machine learning services into cloud platforms, ensuring the delivery of robust, high-availability solutions for complex data challenges.

**Creative Team Member - OSCode-SaIT Chapter, OSCode** *Sept 2025 - Present*

Operating at the intersection of design and development, I lead OSCode's visual strategy while contributing directly to open-source repositories. My role encompasses UI/UX design, codebase maintenance, and technical documentation, ensuring a seamless and intuitive experience for the developer community.

## PROJECTS

**Geo-Agri-Analyst** *PyTorch, React.JS, Python, Kaggle, FastAPI, Hugging Face*

Geo-Agri Analyst is an end-to-end deep learning pipeline that enhances low-resolution satellite imagery using custom Super-Resolution GANs to train high-accuracy land-use classifiers with minimal labeling via Active Learning strategies. It features a deployable web application that fetches live Sentinel-2 data to provide real-time agricultural insights and land classification.

**Portfolio Website** *React.js, Tailwind CSS, GitHub Pages*

Designed and deployed a personal portfolio featuring responsive layouts and reusable components. Showcases projects, certifications, and contact details.

**Polygon Color Filling using UNet** *PyTorch, Kaggle*

Developed a UNet-based deep learning model to fill polygon shapes with specified colors from text input. Integrated custom dataset loading, model training, and evaluation with Weights & Biases tracking.

## CERTIFICATIONS

- Deep Learning – IIT Ropar [NPTEL]
- Robotic Process Automation (RPA)
- Power BI and Data Visualization Skill Development Program
- Data Analytics with Power BI Workshop

## EDUCATION

**B.E. in Computer Science and Engineering** *2022 – 2026*
Sambhram Institute of Technology, VTU
CGPA: 8.8 / 10 ( pursuing 8 $^{th}$ Semester)

**PCMCS** *2020 – 2022*
MES PU College, Sirsi, Karnataka
Grade: 88%

**SSLC** *2018 – 2020*
Shri Kalika Bhavani EM High School, Kansur, Karnataka
Grade: 94%

## PUBLICATIONS

**Geo-Agri Analyst: An End-to-End Decision Support System for Agriculture via Super-Resolution and Active Learning**
*Published in International Journal of Scientific Development and Research (IJSDR), Vol. 11, Issue 2* Feb 2026
Developed a unified deep learning framework to democratize precision agriculture by synergizing a **Perceptual Extreme Super-Resolution Network (RFB-ESRGAN)** with a **Deep Bayesian Active Learning** strategy. The system achieves a fourfold increase in the spatial resolution of Sentinel-2 multi-spectral imagery, effectively recovering latent high-frequency textures for granular land cover classification. By implementing a hybrid query strategy combining Distance-Based Sampling and Spatial-Spectral Entropy, the pipeline reduces labeled data requirements by approximately **85%** while improving Top-1 classification accuracy by **5.4%**. Validated on accessible cloud infrastructure using the BigEarthNet archive, the project was deployed as a full-stack solution using **PyTorch, FastAPI, and React**. Read Full paper at https://ijsdr.org/papers/IJSDR2602037.pdf

## LANGUAGES

English, Kannada and Hindi