

Saail Narvekar

[LinkedIn](#)

Location: Mumbai, Maharashtra, India

Email: saailknarvekar.iitb@gmail.com | Mobile: 7208879805

ABOUT

I am an **AI enthusiast** with interest in **Computer Vision, Deep learning, and Generative AI**, nurtured over **5 years** at e-Yantra, IIT Bombay. I thrive on turning innovative ideas into **impactful solutions** and prepared to embark on new challenges.

EDUCATION

Indian Institute of Technology Bombay <i>Master of Technology in Geoinformatics</i>	<i>CPI = 9.59/10</i>	Mumbai, Maharashtra, India <i>Aug 2021 – June 2024</i>
Vidyankar Institute of Technology <i>Bachelor of Engineering in Electronics</i>	<i>CPI = 8.53/10</i>	Mumbai, Maharashtra, India <i>Aug 2014 – May 2018</i>

EXPERIENCE

Sr. AI/ML Specialist <i>AI Center of Excellence Partnering with Fortune 400 Company</i>	<i>Aug 2024 - Present</i> <i>Pune</i>
<ul style="list-style-type: none">• Led client-focused computer vision projects, leveraging AI to deliver innovative and effective solutions.• Led RnD efforts on edge computing solutions for computer vision, optimizing deployment on edge devices.• Assisted a Fortune 500 company in identifying key manufacturing data parameters through Exploratory Data Analysis (EDA), leading to the prevention of potential losses worth millions.	
Project Engineer <i>e-Yantra, IIT Bombay</i>	<i>Feb 2019 – Jul 2024</i> <i>Mumbai</i>
<ul style="list-style-type: none">• Led and contributed to AI and robotics Research and Development projects involving software and hardware.• Instructor for robotics competition(eYRC) and provided mentorship to student projects impacting 5000+ students.• Gamified Real World Problems to facilitate comprehension and application of technologies and concepts from multiple disciplines for Patrol Fish, Sahayak Bot, Agri Bot, Sentinel Drone and Geo-Guide theme of eYRC.• Instructor for teacher training workshop on Embedded systems and robotics for professors across the country.	
Open Source Contributor, Google Summer of Code <i>istSOS, OSGeo</i>	<i>May 2023 – Aug 2023</i> <i>Remote</i>
<ul style="list-style-type: none">• Contributed to first implementation of OGC standard Sensor Things API enabling geospatial IoT interconnectivity• Used PostgreSQL for data management, FastAPI and postgREST for streamlined request-response.	
Summer Intern <i>Acuradyne Medical Systems Pvt. Ltd.</i>	<i>Jun 2018 – Aug 2018</i>
<ul style="list-style-type: none">• Executed diverse projects focusing on embedded systems, image processing, and Internet of Things applications.• Applied technical knowledge for innovative solutions, contributing to project ideation and implementation.	

PROJECTS

Ground view synthesis using Generative AI based stable diffusion model	<i>MTech. Thesis</i>	<i>Aug'23-May'24</i>
<ul style="list-style-type: none">• Created SAT-GND dataset by web-scraping images and fetching through API for both satellite and ground image.• Generated ground view from <i>satellite</i> image by controlling Stable Diffusion model to create dense feature map.		
Multi-Modal Generative AI for robotics application	<i>e-Yantra, IIT Bombay</i>	<i>May'24-Jul'24</i>
<ul style="list-style-type: none">• Using Large Language Model and Visual Language model for robotics using few shot learning, RAG and vector Db.• Simulated the autonomous mobile manipulator by using multimodal and then implementing in real hardware.		
Deep learning for GIS and remote sensing applications	<i>e-Yantra, IIT Bombay</i>	<i>Jun'23-Sep'23</i>
<ul style="list-style-type: none">• Implemented fusion of HED and DexiNed model on satellite images to delineate farmland boundaries.• Object classification using YOLOv8 model from an drone camera on a real satellite image for guidance of robot.		

Deep learning based 3D Reconstruction from Remotely Sensed Images *Mtech. Seminar* Jan'23 - Apr'23

- Explored **3D reconstruction techniques**, encompassing both **classical** and **deep learning** methodologies.
- Investigated various deep learning models like **GANs, VAE, NeRF** for 3D reconstruction in **remote sensing**.

Data Mining, Integration, and Upgradation of Brain Disease Proteome Map *KCDH, IIT Bombay* Jan'23-Apr'23

- Integrated proteomics datasets from diverse sources into Brain Disease Proteome Map using **web scraping and APIs**.
- Developed **Django models** and **REST APIs** to enable researchers to **visualize** data, advancing early diagnosis.

Agri Bot - Autonomous robot for indoor greenhouse automation *e-Yantra, IIT Bombay* Jul'21 - Feb'22

- Created a greenhouse environment in Gazebo simulator and **simulated** an autonomous mobile manipulator robot.
- Created a **pipeline** for **navigation** using **LiDAR**, tomato **detection** using depth camera and robotic **manipulation**.
- Implemented **algorithm** on robot and created a **remote control architecture** to access hardware over the internet.

Smart Library - Robotic Book Issuing and Retrieval System *BE Final year project* Aug'17 - Mar'18

- Designed and implemented a **robotic automation** system to solve the library book issuing and returning problems.
- Created a **system design** for smart library and developed a robot for autonomously picking and placing the books.

TECHNICAL SKILLS

Languages : Python, C
Libraries : Pytorch, Tensorflow, OpenCV, Langchain, Huggingface, Numpy, Matplotlib, FastAPI, Django
Software/Tools : Linux, Docker, Github, Azure, QGIS, SNAP, ROS, Gazebo, Fusion360
Hardware : Nvidia Jetson, Intel depth camera, Raspberry pi, Arduino, Atmega2560, Drone, UR5 arm, UGV

CERTIFICATIONS

- [Generative AI with Large Language Models by AWS](#)
- [Generative AI for everyone by DeepLearning.AI](#)
- [Machine Learning Operations \(MLOps\) with Vertex AI by Google Cloud](#)

ACHIEVEMENTS

- Achieved a **gold medal** in **weightlifting** and a **bronze medal** in **powerlifting** at IIT Bombay Sports event.
- Achieved **1st Prize** in an inter-college **project competition** for project Smart Library.

POSITION OF RESPONSIBILITY

Web Secretary Jun 2022 – June 2023
CSRE Department, IIT Bombay

- Handled **technical enhancements and updates for departmental website**, optimizing digital presence, and methodically managed **ISRO-IITB Space technology cell meeting portal**.

Teaching Assistant Jan 2024 – April 2024
CSRE Department, IIT Bombay

- Supported professor in **grading** for **Machine Learning in Remote Sensing II course**.

PUBLICATIONS

- Learning Efficacy and Effect of Scaffolding in Online Engineering Education during COVID-19 Pandemic.
- Learn, Build and Compete: An Aquatic Robot-Fish Challenge.
- AgriFrame: Agricultural framework to remotely control a robot inside a greenhouse environment (under review)
- Multimodal Generative AI for Robotic applications (under review)

HOBBIES AND INTERESTS

- **Drone videography**: Constructed a personalized drone for **drone piloting** and capturing aerial videography.
- **Marathon Runner**: Completed **10 km** marathons twice and **5 km** runs thrice.