

# Raj Gandhi

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## EXPERIENCE

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### Eicon Vision — Sr. Software Engineer, 3D Computer Vision

Apr 2025 – Present  
Chennai, India

- Built a Image retrieval system for artworks and artifacts with a database of **1.5 million images**
- Building image analysis pipelines for art authentication and 3D artifact reconstruction.
- Developed high-fidelity 3D model workflows using photogrammetry and point-cloud processing tools.
- Created interactive three.js-based web modules for real-time 3D model viewing and annotation.
- Delivered ARCore-based mobile proof-of-concepts for cultural exhibits.

### Freelance — 3D Processing Consultant

Mar 2025 – Apr 2025  
Remote

- Delivered a Blender add-on for automated mesh cleanup, texture mapping, and photogrammetry prep.
- Reduced manual **processing time by 60%** with a GUI-based batch processing system.

### IndicVision Pvt Ltd (formerly PhotoGAUGE India) — Software Engineer / Lead Engineer

Jul 2021 – Feb 2025  
Chennai, India

- Developed a wound monitoring application and website to help patients get treated remotely, **Handled high volume 3 GB video input and high memory 2 GB model data from each user.**
- Designed and maintained 3D photogrammetry pipelines improving scan **success rates from 50% to 90%.**
- Developed ML models for object detection, defect segmentation, and weight estimation.
- Automated 3D measurement workflows and integrated CI/CD pipelines, **increasing throughput by 40%.**
- Built web-based 3D viewers using three.js and integrated them into production systems.
- Developed a remote measuring system for one of the clients resulting in savings of 1.3 million dollars annually.

### Goodrich Gasket Pvt. Ltd. — Engineer, New Product Development

Jul 2020 – Jun 2021  
Chennai, India

- Performed R&D for new product lines and ERP/HRMS system implementations across production units.
- Implemented cost saving changes to manufacturing line saving Rs 50 Lakhs annually.
- Led the ERP migration effort from SAP to SAGE ERP and HRMS application systems.
- Improved manufacturing process workflow.

### Wheels India Ltd. — Graduate Engineer Trainee

May 2019 – Jun 2020  
Chennai, India

- Managed supply chain operations and introduced inventory workflow improvements.
- Made detailed costing reports for production parts manufactured in-house.
- Tracked and implemented various cost saving manufacturing processes across units in the company.

## SKILLS

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**Languages:** Python, JavaScript (three.js, React), C++, Bash

**Frameworks & Libraries:** OpenCV, PCL, TensorFlow, Pytorch, Three.js, Blender Python API, FastAPI

**Tools:** Metashape, Docker, Git, AWS, Azure, CI/CD, JIRA, Solidworks, NX CAD, Blender, CloudCompare

**Domain Interests:** 3D Computer Vision, Photogrammetry, 3D Web Applications, Pipeline Automation

## PROJECTS

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**3D Wound Care Application** | *Three.js, Python, Node.js, Flutter, FastAPI, Pytorch, Metashape, RC*

- Developed a cross-platform application for 3D wound analysis and measurement.
- Built web-based 3D viewers using three.js and integrated 3D processing workflows for automated wound size estimation and visualization.

**Blender Photogrammetry Add-On** | *Python, Blender API, Pytorch, SAM*

- Automated point-cloud preprocessing, mesh decimation, and texture projections for 3D models.

**3D Processing Automation Pipeline** | *Python, OpenCV, Metashape, Pytorch, Node.js*

- Built an end-to-end industrial 3D scan processing system with REST API integrations.

## EDUCATION

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**SRM Institute of Science and Technology, Chennai**

B.Tech in Mechanical Engineering — 87.7%

Jul 2015 – May 2019