Joseva A

Civil Engineering Student | IGBC AP Associate | BIM & AI Enthusiast

Tiruchirappalli, Tamil Nadu, India | Email: 126001020@sastra.ac.in | Phone: +91 8015164110

LinkedIn: linkedin.com/in/joseva2748 | GitHub: github.com/Jovix27

Professional Summary

Innovative Civil Engineering undergraduate and IGBC Accredited Professional (AP) Associate with expertise in sustainable design and AI-driven construction solutions. Skilled in BIM modeling, data-driven analysis, and infrastructure design. Proficient in AutoCAD, Revit, STAAD Pro, Python, and GIS-based analytics. Strong ability to integrate geotechnical analysis with emerging AI technologies for smart and resilient infrastructure development.

Professional Certifications

IGBC Accredited Professional (AP) Associate
Indian Green Building Council

- Certified IGBC AP Associate demonstrating advanced knowledge in sustainable design, energy optimization, and indoor environmental quality.
- Authorized to contribute to green building certification projects and sustainable infrastructure initiatives.

Education

Bachelor of Technology in Civil Engineering
SASTRA Deemed University, Thanjavur, India

- **CGPA:** 7.10 (Till 6th Semester)
- **Specialized Coursework:** Construction Technologies, Sustainable Infrastructure Design, Building Information Modeling (BIM)
- **Key Focus Areas:** Design of RCC, Green Building Design, Estimation & Costing

Professional Experience

Intern (Metro Construction Project)
Larsen & Toubro (L&T), Chennai

- Assisted in Chennai Metro Phase 2 Corridor 3 execution at Chetpet, Royapettah, Thiruvanmiyur, and Vanagaram casting yard.
- Supported tunneling operations analysis, Tunnel Boring Machine (TBM) monitoring, and site coordination ensuring safety and quality compliance.
- Collaborated with L&T's GeoTech division to study **GeoFreq** for real-time geotechnical monitoring and digital infrastructure safety.
- Conducted a technical study on GeoFreq data digitization, threshold alerting, and GIS-based visualization.
- Conceptualized **ClimaNEX AI**, an AI-powered hyper-local weather forecasting system using Random Forest and Transformer models.
- Presented findings to mentors, outlining methodology, AI integration, and dashboard architecture.
- Acknowledged for demonstrating initiative and technical expertise in linking field engineering, geotechnical analytics, and AI-driven innovation.

Research Intern (Transportation Analysis)
National Institute of Technology (NIT), Trichy

- Conducted a large-scale **Driver Behavior Survey** with 110+ participants using Google Forms and SPSS.
- Performed quantitative data analysis and identified behavioral patterns influencing urban traffic efficiency.
- Developed automated data validation protocols improving dataset reliability by 20%.
- Delivered recommendations for improving road safety and infrastructure planning.

Technical Projects

Precipitable Water Vapor Validation System

- Built and validated Random Forest bias-correction models aligning MODIS PWV with NOAA reanalysis data (**R^2=0.89, RMSE ↓35%, MAE ↓31%**).
- Engineered a reproducible Python data pipeline for satellite ingestion, quality control, and model evaluation.
- Identified PWV thresholds aiding hydrometeorological early warnings.
- Enhanced regional climate model accuracy for agricultural advisories.

Energy Efficient Building Design

- Converted traditional designs into BIM-based green models using Autodesk Revit.
- Achieved 30% reduction in energy consumption through passive and material-efficient strategies.
- Modeled thermal comfort and building envelope efficiency through energy analysis tools.

Sustainable Campus Hotspot Design

- Designed eco-friendly shaded rest zones using locally sourced materials for SASTRA campus.
- Reduced construction waste by 50% through reuse of existing resources.
- Proposed a scalable, replicable model for sustainable campus infrastructure.

Technical Skills

Civil Engineering Software: AutoCAD, Revit, STAAD Pro, Insight - Energy Analysis, FormIt Pro, EPANET, QGIS, Plaxis 2D

Programming & AI: Python, Random Forest, Generative AI, Machine Learning

Data Analytics: MS Project, LibreOffice, IBM SPSS, GIS, Data Visualization, Satellite Data Processing

Core Competencies: Sustainable Design, Energy Efficiency, AI in Construction, Construction Management, Transportation Engineering

Additional Training & Workshops

- **Building Information Modeling (BIM) Workshop** – SASTRA University (2024)
- **Revit Workshop** – L&T Construction, SASTRA University (2023)
- **3D Printing in Construction** – SASTRA University (2024)
- **Advances in Transportation Geotechnics** – IGS Thanjavur (2025)
- **Daksh AI Hackathon** – SASTRA University (2025)

Key Achievements

- **IGBC AP Professional:** Certified with distinction, demonstrating high competency in sustainable design and green building implementation.
- **Hackathon Recognition:** Qualified as a Finalist in the internal (college-level) rounds of the Smart India Hackathon (2024 & 2025) and in the AI for Business track at the Daksh AI Hackathon (2025).
- **Research Impact:** Delivered impactful Civil–AI hybrid projects with measurable engineering outcomes.