JEEVITH KUMAR JAYAKUMAR

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EDUCATION

University of Southern California   Los Angeles, California
Master in Transportation and Highway Engineering   August 2024-Present
Coursework: Data Analytics for Surface Transportation, Intelligent Transport Operations, Design of Transportation Infrastructure,
Digital Tools for Transportation, Transportation System Analysis, Construction Planning and Pre Construction   GPA: 3.95

JSS SCIENCE AND TECHNOLOGY UNIVERSITY (JSS STU)   Mysuru, Karnataka, India
Bachelor of Civil Engineering   January 2019-December 2023
Coursework: Highway Engineering, Railway and Airport Engineering, Road Safety Engineering, Concrete and Highway Material Testing Lab.

PROFESSIONAL EXPERIENCE

WSP USA   Portland, OR, USA
Traffic Engineering Intern   May 2025-Present
- Apply MUTCD and state Department of Transportation (DOT) standards to traffic signal modernization, freeway widening, and bridge rehabilitation projects across five states (Hawaii, Utah, Washington, Idaho, and California).
- Develop microsimulation and macroscopic traffic operations models in PTV Vissim, Synchro, and Highway Capacity Software (HCS) for multiple intersection- and corridor-level studies, evaluating LOS, delay, queues, and peak-hour performance.
- Create and update signing, pavement marking, lane geometry, traffic control, and roadway lighting plan elements in AutoCAD, MicroStation, OpenRoads, and InRoads for corridor and bridge projects, with field data verification.
- Coordinate with traffic design and traffic operations teams across Pacific Northwest and multi-state projects, addressing QA/QC review comments across dozens of plan sheets and traffic models to ensure standards compliance.

M.J ASSOCIATES   Gundlupet, India
Junior Civil Engineer, Site Management   July 2023-May 2024
- Led concrete road construction for 15 rural roads, enhancing road quality and durability.
- Managed installation of rural drainage systems for 10 projects, achieving effective water management and compliance.
- Planned and managed 15 concrete road and drainage projects, ensuring timely and high-quality completion.

NATIONAL HIGHWAY AUTHORITY OF INDIA (NHAI)
(Ministry of Road Transport and Highways, Government of India)   Ramanagara, Karnataka, India
Trainee Engineer, 6 Laning of Nidaghatta-Mysore NH-275   August 2022-September 2022
- Executed on-site construction monitoring and inspection activities for the INR 3,500 crore Mysuru–Bengaluru Express Highway Project (6-laning of 61.1 km)
- Performed on-site inspections and material testing to ensure construction quality and adherence to engineering specifications.
- Assessed project safety protocols and compliance across 50+ locations, reducing risks and ensuring conformity with highway standards.

ACADEMIC PROJECTS

Dynamic Toll Pricing on the I-10 ExpressLanes   August 2025-December 2025
- Analyzed dynamic congestion pricing on 15.8-mile I-10 ExpressLanes corridor using 5-minute PeMS speed, flow, and occupancy data for peak-period conditions (September 2020).
- Applied a First-Difference Instrumental Variables (FD–IV) approach in Python to isolate pricing effects, identifying an approximately 15 mph improvement in downstream speeds at primary westbound bottleneck.
- Compared peak-period speeds across upstream and downstream I-10 ExpressLanes segments, showing sustained downstream speed improvements and reduced congestion variability under dynamic tolling.

Autonomous Shuttle Project: LA Olympics 2028   November 2024-December 2024
- Designed and proposed an Intelligent Transportation System (ITS) to connect LAX, UCLA Athlete Village, and USC Memorial Coliseum via autonomous shuttles for the 2028 LA Olympics.
- Developed a comprehensive website for booking taxis, hotels, and transportation, featuring interactive maps of 200+ bike stations, an Olympics calendar, and travel plans to support millions of visitors.
- Analyzed 122,539 data points using R Software to optimize routes and integrate EV charging and micro-mobility hubs, 30% improvement in operational efficiency, and a 20% decrease in congestion while enhancing transit accessibility.

LEADERSHIP ROLES

- Engaged member of the Institute of Transportation Engineers (ITE), University of Southern California, contributing to student-led transportation initiatives, technical discussions, and industry engagement activities.
- Served as Public Representative Member for the Nirman Club, leading public-facing initiatives, facilitating technical discussions and industry engagement activities, and advancing transportation and infrastructure initiatives, increasing participation by 30%.

SKILLS AND INTERESTS

Technical Proficiency: AutoCAD, Inroads OpenRoads, MicroStation, OpenRails, R Programming, PTV Vissim, Synchro, HCS, Agi32,MS Office.
Core Skills: Project Management, Transportation & Highway Design, Traffic Operations & ITS, Data Analysis & Planning, Research, Leadership.
Interests: Sustainable & Smart Transportation, Highway & Traffic Engineering, Infrastructure Planning & Design, ITS Applications, Data-Driven Transit Solutions, Mobility Innovation.

CERTIFICATIONS AND AWARDS

- Certificate in Complete AutoCAD 2018-21 course and BIM Application for Roads, Highways, and Transportation Design.
- Awarded "Best Project of the Year 2023" for final year project by Karnataka State Council for Science and Technology.
- Recognized among the Top 100 Summer Interns in the USA (2025) by National Intern Day, presented by WayUp x Yello.