JITEN HALAI

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PROFESSIONAL SUMMARY

CAD Technician with a decade of experience in rail and bridges, working beyond routine drawing production into 3D modelling, checking and automation. Drawings are produced in MicroStation, including 2026, AECOsim, Bentley OpenBuildings Designer and AutoCAD. Excel is used at a high level to manage workload and to automate repetitive tasks.

AI is used to assist that work, with Claude, Grok, Cursor, ChatGPT and Higgsfield, and with custom MCP connectors so DWG and DGN files can be checked by an AI agent. This follows the automation at Rendel, where an Excel formula placed the post-tensioning tendons.

EMPLOYMENT HISTORY

07/2026 – Present **CAD Technician**
ALM Technical – Remote
Contractor on several rail civils schemes, producing drawings in MicroStation and AutoCAD. Dynamic views are set up from the models and referenced to the drawings.

- Manchester Airport

Civil structural steelwork for the rail gantries on the Manchester Airport platform remodel, and the signal post drawings on the same scheme, including the plans, sections and isometric views. Multidisciplinary work on ProjectWise with other companies.

- Gobowen Siphon

Setting-out points, including the lift positions and the steelwork staging, with as-built drawings and general arrangement drawings for construction. The scheme is currently in its construction phase, in AutoCAD and MicroStation.

- Rhymney River Culverts

Plans and sections for strengthening the culverts, produced from an AutoCAD survey and coordinated with the site photographs and videos.

08/2024 – 08/2025 **Senior CAD Technician**
Pell Frischmann - Hybrid

- Gallows Corner

I worked on the Gallows Corner Flyover for TfL, integrating the steelwork with the highway. The flyover connects the A127 to the A12 over the Gallows Corner roundabout and gives access to the M25.

In the structures team I produced the CAD steelwork and layout drawings and checked them in Excel VBA, AutoCAD LISP and AutoCAD 3D, including the contract headroom checks and the CAD checks against our internal standards. I set the levels out with the highways team and the structural engineers.

I managed the junior staff and checked their work. With the engineers and the principal engineer I resolved conflicts between the steelwork and the roadway alignments, and the checks confirmed the engineers' design.

11/2022 – 08/2025 **CAD Technician**

VEDA Associates - Remote

Sole CAD Technician, working independently and coordinating several projects at once, with weekly multidisciplinary reviews under pressure to meet client deadlines.

- Tilehurst Station

I took on a Network Rail AFA scheme on ProjectWise from the previous technician. The 2D and 3D pack was 8 GRIP 4 and 26 GRIP 5 drawings, to irregular deadlines, and I worked with the lead engineer.

- Wymondham Subway

A developer proposed a pedestrian and cycle subway to the council, under the railway and beside an underpass. With the lead engineer I worked in 2D and 3D for the clash detection. The 66 drawings were under my management.

- BAM Depot Electrical Safety

Proposing handrailing, GRP walkways & decision gates for staff to safely walk alongside running rails.

- Bristol Portway As Built Drawings

Addressing redline markups to finalise As Built drawings.

03/2021 - 08/2021 **Structural AECOsim Modeller**

WSP, Rail - Remote

- Brent Cross West Thameslink Station

Hired to recover an already missed deadline, I brought Brent Cross West Thameslink Station back on schedule. The station was modelled in 3D to BIM Level 3. I managed and checked a small team in India, reviewing the models and drawings and returning comments.

I carried out the in-house multi-disciplinary clash checks. Dynamic views in cached states were referenced to the drawings and overlaid with embellishment models.

05/2019 - 03/2021 **CAD Technician**

Rendel Ltd - London

- High Speed 2 - Phase 1 - Colne Valley Viaduct

Worked alongside the principal engineer to arrange the post-tensioning tendons within the precast segments of the ~3.4km viaduct. My initial responsibility was to model all tendons in 3D based on coordinates provided by the engineering office in France. I automated the placement of dynamic arcs, anchorages, and rotations in 3D space using a high-level nested formula developed in Excel for Notepad.

Subsequently, I collaborated with the CAD lead and took the initiative to coordinate a team of six CAD technicians, leveraging my extensive experience in 3D modelling, rail, and bridge structures. I contributed significantly to modelling critical viaduct elements, including piles, pile caps, piers, bearings, segmentations, cable troughs, parapets, upstands, waterproofing, north and south abutments, ballast, track slab, and the north embankment, all to BIM Level 2/3 standards. I also managed the team workload spreadsheet, ensuring timely delivery and adherence to CAD QA standards.

04/2019 - 05/2019 **CAD Technician**

OTB Engineering - London

- Thames Tideway

Sole CAD Technician. I modelled the piles and pile cap to BIM Level 2 in MicroStation, with 3D extractions and 2D embellishment overlaid on the drawings. Reinforcement to BS 8666, and a bar bending schedule issued for production.

01/2019 - 04/2019 **CAD Technician**
Global Rail Construction - Hatfield, Hertfordshire
- Network Rail Track Crossings

Network Rail UTX drawings in 2D, checked against a 3D topographical survey for gradients and where retention was required. CAD QA checks and clash resolution were reflected in the drawings.

07/2018 - 12/2018 **CAD Technician**
Atkins Global - London
- Euston Enabling Works

I worked in a team of 7 technicians to model Euston Station and set the cutting planes in geospatial coordinates, so the structure could be sectioned and the new elements aligned with the existing station.

I created dynamic views in a dynamic state to follow the 3D model, adjusting the settings and configuration files to resolve unexpected visual changes, then toggled them back to cached states to finalise the drawings. Multi-disciplinary clash detection and CAD QA checks were completed before approval.

02/2018 - 07/2018 **Structural CAD Technician**
Mott MacDonald - Croydon
- High Speed 2 - Phase 1

Working in a team of over 30 CAD technicians, I modelled overbridges, viaducts and culverts in 3D to BIM Level 2/3, set out to the Ordnance Survey grid, to strict deadlines.

04/2017 - 02/2018 **CAD Coordinator**
Laing O'Rourke - London
- Northern Line Extension

Collaborated with the temporary works team to design and develop various temporary structures, including steel hoarding supports, staircases, and tower crane RC foundations, all detailed accurately in 3D.

08/2014 - 04/2017 **Structural CAD Technician**
Mott MacDonald - Croydon
My career began as a Civil Engineering Apprentice, alongside a senior CAD mentor. The apprenticeship was 4 days in the office and 1 day of part-time study towards a Civil Engineering Diploma (NVQ Level 3) over 2 years.

The projects included:
- Wessex Capacity Alliance – Waterloo International Terminal (Preliminary Design)
- Doha Orbital Highway (Detailed Design)
- Ghorjomi Bridge (Preliminary & Detailed Design)
- New Champlain Bridge (Tender Design)
- High Speed 2 (Draft Design)
- Bellenden Road (Preliminary Design)
- Mitre Bridge
- Croydon Bridges (Preliminary Design)
- Tottenham High Road (Detailed Design & Temporary Works Layout)
- Victoria Bridges (Preliminary Design)

I began my career on AutoCAD for 1.5 years, then trained in 2D and 3D MicroStation/AECOsim. I was seconded to another team on the Wessex Capacity Alliance.

AREAS OF EXPERTISE

- MicroStation 2026, 2D/3D
- Connect Edition, V8i, SS5 and SS6
- AECOsim and OpenBuildings Designer
- AutoCAD 2010 onwards
- Bridges and viaducts
- Steel and concrete
- Rail and road bridges
- Steelwork detailing
- Post-tensioning bridges
- ProjectWise
- Structural and civil engineering
- CAD compliance checks
- Leading a CAD team
- Multi-disciplinary coordination
- Macros on AECOsim and AutoCAD
- Excel for workload management
- AI: Claude, Grok, Cursor, ChatGPT, Higgsfield
- MCP connectors for DWG and DGN QA

EDUCATION

09/2014 - 06/2016 **NVQ Level 3: Civil Engineering ONC**
College of North West London - London

09/2012 - 06/2014 **NVQ Level 3: Electrical Engineering Extended Diploma**
Stanmore College - London

09/2010 - 08/2012 **GCSEs**: **8 GCSEs (A to C) - Including: Maths (A), English (C), Science (C)**
Kingsbury High School - London