NIRMAN KESARI

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SCAN ME

TITLES

Transport Analyst at ESC, TfNSW
(May 2019 – Dec 2021, Contract)

Professional Transport Planner / Analyst, AECOM
(Jan 20 – Present)

Graduate Transport Planner, AECOM
(Jan 19 – Dec 20)

Undergrad Transport Engineer, AECOM
(Jan 18 – Dec 18)

EDUCATION

Bachelor of Civil Engineering, UNSW Sydney
(Completed, 31 August 2018)

Nirman is an analyst with 4+ years of experience in consulting clients to unlock the potential of their data by the application of advanced analytics and visualisation tools.

He specialises in developing interactive dashboards and data models with workflows involving Python Pandas, Power BI, TensorFlow, etc., and holds experience in web development frameworks such as Django and React.

Nirman is passionate about minimising technical complexity for clients and focuses on outlining a clear fact-based story. His deliverables focus on achieving key client objectives.

Key Skillset

- 3+ years of experience in a similar role as secondment at TfNSW

- Certified Power BI Data Analyst Associate by Microsoft

- Competent in data manipulation using Python Pandas, SQL, Excel, and experienced in working with APIs and databases

- Competent in handling TfNSW datasets such as Opal, BOAM / ROAM / FOAM Data, SCATS, and Crash data

Relevant Experience

Development ITAPs Management Tool using Power BI
Network Solutions, TfNSW, Oct 21 – Jan 22

The portfolio of 30+ ITAP studies provides vast recommendations to improve the network and is challenging for the team to track each of them.

Nirman was engaged to ease the process and based on the client's objective, Power BI best suited their needs. He was responsible for:

- Development of data model with iTAPs data

- Development of a dashboard user interface in Power BI hosted online

- Auto-update the information as the data is often updated with the progress of projects

- Export to the user via e-mail selected rapid appraisals

As a result, the dashboard allowed key stakeholders to navigate through information on a map and filter as per their cost and funding criteria seamlessly. The team saved the time and effort required to go through multiple documents and respond to queries in a short time.

Victoria Road and Parramatta Road SBC – Python and Power BI
Network Solutions, TfNSW, Jul 21 – Nov 21

The strategic business cases (SBCs) for Victoria Road and Parramatta Road corridors aimed to attain the 2056 vision of future cities by making these corridors more accessible by public transport and offer on placemaking promises.

CERTIFICATIONS

- Power BI Data Analyst Associate
- Pandas Foundation – Data Camp
- Python Certification (PCEP)
- Python Computer Vision with OpenCV and Deep Learning

PROGRAMMING

- Python – Competent
- Power BI – Competent
- Excel – Competent
- PostgreSQL – Intermediate
- AWS RDS/S3 – Intermediate
- Django – Intermediate
- JavaScript – Intermediate

LANGUAGES

- English – superior proficiency
- Hindi – superior proficiency

Nirman was engaged to support the data analytics requirements of the project. He was responsible for:

- Assessment of bus corridor to identify areas of low speeds and delays.
- Aggregation of opal data to understand stop utilisation and patronage on different segments of the corridor
- Understand stop connectivity and frequency of various services
- Assessment of traffic volumes at multiple intersections of the corridor and how it varied pre-COVID, during COVID and post-COVID
- To achieve, the outcomes based on data sets, Python was used to aggregate the data and the Power BI model to analyse and visualise outcomes.

Post completion of the support on this project, Nirman was recognised for high-quality and on-time deliverables. His work helped in driving key decisions.

Better Bus Priority Program (BPIP), Pop Up Bus Lane Assessments
Easing Sydney's Congestion, TfNSW Oct 2020 – Jan 21

BPIP planned to undertake pop up bus lane trials and required analytics support to compare priority. Nirman was engaged to assess:

- LGA network to identify segments of low speeds and high patronage along the corridor using BOAM data
- Benefits per passenger, likely to be obtained post implementation of bus lane
- Traffic Volume along the corridor and impact on general traffic

During his engagement, eight different sites were assessed and reported. His work supported in identifying key issues and prioritising locations where the implementation of pop-up bus lane would result in best outcome.

Crash Trend Algorithm and Data Model in Power BI
Portfolio Management Team, TfNSW, May 20

Crash reports have been a key document in driving funding for safety projects. However, it possesses a challenge when you're looking at a LGA level.

Nirman worked with colleagues to understand the criteria of identifying a significant crash and developed an algorithm in python to process data at LGA level.

In addition, an interactive interface allowed team to identify trends over the year, based on RUM code, surface condition or a mix of both.

Advanced Vehicle Tracking using computer vision and AI,
CISCO / TfNSW, March 20

TfSNW's innovation team needed support in development of complex AI technology, which was recently made public in 2021.

Based on his knowledge of AI and neural nets, Nirman was engaged to support CISO with the development of technology and provide potential use cases.

BOAM data python script and interactive dashboard in Power BI, Network Solutions, TfNSW, June 20 – Aug 20

Bus Opal Assignment Model (BOAM) data is a big dataset, rich in providing information on bus routes, passengers, speed & delays of bus services across Greater Sydney and Newcastle region.

Nirman was responsible for development of python script to source data from Oracle database, which enhanced speed of data acquisition by 10 folds.

In addition to script, he was responsible for developing a data model in Power BI with key metrics.

As a result, flow of information was streamlined and enhanced turn around times for requested information.

Transport Analyst,
Easing Sydney's Congestion, TfNSW, 2019 – 2021

As a part of AECOM's contract with TfNSW, Nirman has been supporting Portfolio Management Team at Easing Sydney's Congestion (ESC), TfNSW as Transport Analysts. His involvement at ESC has evolved over the months and has gained knowledge and experience in the utilisation of transport datasets.

In addition to delivering work, Nirman was responsible for managing client's expectations and find more work for the Analyst Team.

Some of his work included:

1. **Supporting stimulus package work** to assess and convey the benefits of intersection upgrades, assessing pre-and post-construction traffic volumes and travel times for 20+ intersections to drive a study-based approach of benefits incurred and feed into stimulus business case.

2. **Corridor Investigations & Analytics** powered by TfNSW datasets to support multiple teams across ESC to investigate corridor performance based on historic travel time data, SCATS traffic volume data, and BOAM data for public transport, with Power BI simplistic visuals to interact and drive outcomes.

In his secondment, Nirman has supported 150+ projects with their data needs to accomplish objectives.

Nirman's fluency with python and Power BI has enabled ESC to readily acquire information on the performance of corridors and enhance data drive decision making.