

# David Alexander Tedjopurnomo

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## Education

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<b>RMIT University, PhD in Computer Science</b>	<b>2023</b>
<ul style="list-style-type: none"><li>- Received the CSIRO Data 61 scholarship and scholarship top-up</li><li>- Received the RMIT 2020 Research Achievement Award</li></ul>	
<b>The University of Melbourne, Master of Information Technology</b>	<b>2017</b>
<b>The University of Newcastle, Bachelor of Information Technology</b>	<b>2014</b>

## Experience

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<b>Swinburne University of Technology, Postdoctoral Research Fellow</b>	<b>05.2024 - 12.2024</b>
<ul style="list-style-type: none"><li>• Participated in an Australian Research Council-funded research on traffic incident management</li><li>• Performed traffic incident simulations using Aimsun and Eclipse SUMO</li><li>• Mined, cleaned and integrated traffic flow and traffic incidents data from Sydney and Sacramento</li><li>• Developed machine learning models for future traffic flow prediction</li></ul>	
<b>RMIT University, University Tutor</b>	<b>02.2023 - Present</b>
<ul style="list-style-type: none"><li>• Tutored the following courses: Java Programming Bootcamp 1, Java Programming Studio 1, Python Programming Bootcamp 1, Python Programming Studio 1, Web Programming Bootcamp, Web Programming Studio, Performance Management Foundations</li><li>• Achieved a 4.02 out of 5.00 Good Teaching Score (GTS). Exceeding the school, college and RMIT mean GTS score in 2023</li></ul>	
<b>The University of Melbourne, University Tutor</b>	<b>02.2023 - Present</b>
<ul style="list-style-type: none"><li>• Tutored the following courses: Advanced Database Systems, Geospatial Data Management, Research Project</li></ul>	

## Selected Publications

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**David Alexander Tedjopurnomo**, Zhifeng Bao, Farhana Choudhury, Hui Luo, and A. K. Qin. 2022. Equitable Public Bus Network Optimization for Social Good: A Case Study of Singapore. In *2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT '22)*. Association for Computing Machinery, New York, NY, USA, 278–288. <https://doi.org/10.1145/3531146.3533092>

**David Alexander Tedjopurnomo**, Zhifeng Bao, Baihua Zheng, Farhana Choudhury and A. K. Qin. 2022. A Survey on Modern Deep Neural Network for Traffic Prediction: Trends, Methods and Challenges. In *IEEE Transactions on Knowledge and Data Engineering*, vol. 34, no. 4, pp. 1544-1561. <https://doi.org/10.1109/TKDE.2020.3001195>

**David Alexander Tedjopurnomo**, Xiucheng Li, Zhifeng Bao, Gao Cong, Farhana Choudhury, and A. K. Qin. 2021. Similar Trajectory Search with Spatio-Temporal Deep Representation Learning. In *ACM Transactions on Intelligent Systems and Technology*, vol. 12, no. 6, Article 77 (December 2021), pp 1-26. <https://doi.org/10.1145/3466687>

## **Skills & abilities**

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- Programming languages: Python, Java, C#, Javascript, HTML, CSS, SQL, Bash
- Machine learning: Keras, Tensorflow, Pytorch, Scikit-learn
- Data science, data mining, data cleaning and integration, mainly with Pandas
- Database (SQL), geospatial databases (PostGIS), geospatial data visualization (QGIS)
- Research: identifying requirements, performing experiments, writing reports and research papers