M. Tsaqif Wismadi

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SUMMARY

Tsaqif is a **Geospatial Data Scientist**, **Urban Data Analyst**, and **Urban Planning Specialist** who is proficient at examining urban systems and resolving spatial development issues using Geo-Information Science and data statistics. He has spent the last five years working in multidisciplinary teams to deliver high-quality masterplans and public policies by leveraging cities' big data. Many of his projects involved the spatial sector (i.e. transport, housing, real estate, tourism, urban design, and telco). His typical workflow consists of (but not limited to) API calls, relational database management, data cleaning-exploration-analytics, dashboarding, 3D visualization and AI modelling. Additionally, in the last two years, he has been focusing his interest on urban transport modelling and worked on projects such as AI-based traffic congestion modelling, four-step travel demand modelling for public transport provision, and network analysis for proximity-based coverage.

EDUCATION

M.Sc., Geo-Information Science and Earth Observation (ITC) - Universiteit Twente, The Netherlands
2020 - 2022, GPA: 7.63 / 10 (Upper 2nd Honours)

- ***The Relation Between Street Pattern and Traffic Congestion, An Investigation Through Machine Learning Approach***

  This thesis research involved the development of a machine learning model for predicting traffic congestion, by using street pattern indices and recorded traffic data. The study's goal is to comprehend and quantify the changes in the urban system (traffic and street morphology) in Barcelona as a result of the recently enacted superblock policy.

B.Urp., Urban and Regional Planning – Universitas Gadjah Mada, Indonesia
2015 - 2019, GPA: 3.72 / 4 (Cum Laude Honours)

- ***The Urban Design-Based Revitalization of Prawirotaman's Tourism Corridor, Yogyakarta***

  This thesis project involved a 3D design process of the tourism corridor of Prawirotaman's Street by applying several design concepts such as walkability, visual appeal, social interaction and circulation. This project aims to revitalise the existing district systems and make them less congested and more appealing.

EXPERIENCE

Urban Planner - *Shirvano Consulting* (Full Time), Indonesia, 2019 -2020
- Transformed geospatial analysis results into an applicable real estate and housing strategy
- Formulated tourism masterplan for several municipalities and villages in Central Java, Indonesia
- Developed relevant smart cities policy frameworks and infrastructure deployments for several cities in East Java, Indonesia
- Formulated an avalanche-risk-sensitive outer road masterplan for the city of Wonosobo, Indonesia

Urban Data Analyst - *Egis Group* (Internship), Indonesia, 2017-2018
- Acquired, managed, and analysed source-agnostic geospatial data for various construction projects
- Developed data dashboards for site monitoring and evaluation
- Tailored and transformed various geodata for transport engineering purposes
- Drafted multiple transport blueprints and analyses into applicable transportation plans for the national government
- Conducted various urban modelling and geospatial analyses such as land suitability analysis, network analysis, and disaster vulnerability analysis

Assistant Lecturer - *Gadjah Mada University* (Part-Time), Indonesia, 2016-2018
- Taught several urban analytics courses such as urban information systems, transportation planning, land use planning, urban design studio, and spatial theory

SKILLS

Geospatial analyses and modelling • Location-based service • Remote sensing • Web services API

Location intelligence • Transport modelling • Big data processing • Relational database management

Dashboarding • Geocoding • Data cleaning • Data analytics and visualization • Spatial statistics

Programming • Machine learning • Distributed computing • Agent-based modelling • Web GIS

3D design • Policy drafting • Governmental affairs • Stakeholder engagement • Business acumen

Project management • Teaching and mentoring • Presentation • Public speaking • Research

SOFTWARE COMPETENCIES

ArcGIS Pro • ArcGIS Online • QGIS • ERDAS • SNAP • ILWIS • CARTO • Geoplot • PostGIS • NetLogo

PostgreSQL • SPSS • MySQL • Google Earth Engine • Contextily • Apache Dask • Apache Spark

Hadoop • Tableau • Python • JavaScript • ScikitLearn • NumPy • Pandas • Geopandas • Matplotlib

Seaborn • PySal • SciPy • Somoclu • Urllib • TensorFlow • SketchUp • Lumion • V-Ray • CityEngine

CorelDRAW • Adobe InDesign • Adobe Premiere Pro • Microsoft Office • Mendeley Referencing

LANGUAGES

- Indonesian: Native
- Javanese: Native
- English: Proficient (IELTS: 8.0)
- Dutch: Elementary level

HONOURS AND AWARDS

- **PERSEUS Doctoral Programme**
  Fully employed – fully funded PhD Candidate programme at Norwegian University of Science and Technology (NTNU), Trondheim, Norway

- **Studeren in Nederland Scholarship (StuNed), 2020-2022**
  Fully funded 2 years master's scholarship from The Nuffic Neso, Netherlands
  Total Grant: €56,900

- **Finalist of Global Challenges, (Geospatial) Local Action**
  Performed innovative remote sensing analysis to detect erosion trends in North-Holland
  Universiteit Twente, Enschede, Netherlands, April 2020

- **Finalist of Innovation for Slum Area towards New Urban Agenda**
  Designed flood-sensitive riverside settlement area in Yogyakarta, Indonesia
  Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia, April 2017

- **Semi-finalist in Concept, Planning, and Development in Smart City**
  Drafted policy plan for various urban sensor implementations in Makassar, Indonesia
  Universitas Islam Negeri Alauddin, Makassar, Indonesia, March 2017

- **Delegation of Indonesia**
  Delegation of Indonesia in South China Sea Dispute Resolution
  ASEAN Youth General Forum, Yogyakarta, Indonesia, May 2016

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

_____ Date: 16 February 2023
            [M. Tsaqif Wismadi]