

Suman Sukumar Dharmasthala

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PROGRAMMING SKILLS

Statistics and Modeling: Python, R, Excel, Postgre-SQL (learning), NetLogo (learning)

Mapping: ArcGIS, QGIS, ERDAS Imagine, Google Earth

Others : LaTeX, Linux, Git, C++

PROFESSIONAL EXPERIENCE

Independent Data Scientist

March 2020 – Present

Germany/ Czech Republic/ India

- Time series forecasting of electricity consumption, and price using machine learning models using Python
- Data Analysis and Visualization using R: Inter-state migration in India using Census 2001 and 2011 and climate related vulnerabilities
- Network Analysis to find street network efficiency and bipartite migration networks to find potential growth centres using Python
- Ranked 2nd among 100+ applications in Young Data Scientist Program organized by Climate Connect Digital
- Research Assistant in Helmholtz Centre for Environmental Research (UFZ), Leipzig, Germany - from July 2021 to Oct 2021
- Ongoing research work on Urban Heat Island Effect (time series and netcdf data using Python)
- Authored several publications in high impact international journals and media

Indian Institute for Human Settlements (IIHS)

November 2018 – March 2020

Research Associate

Bangalore, India

- Real estate financing by government & private agencies - practices, policies and data

Khatib and Alami Engineering Consultants Private Ltd.

March 2018 – November 2018

Urban Planner

Bangalore, India

- Land Suitability analysis, KPIs at country level for OPEC countries, business development

National Capital Region Planning Board (NCRPB), GoI

May 2017 – October 2017

Urban/Regional/Infrastructure Planner

Delhi, India

- Integration of 6 newly added districts in the National Capital Region (55,000 sqkm) to the Regional Plan 2021

Royal HaskoningDHV Pvt. Ltd.

June 2014 – May 2017

Assistant Manager - Planning

Bangalore, India

- Worked in the core team preparing the Bangalore Master Plan 2031, identified quantifiable issues, proposed solutions, presented to the CM and Chief Secretaries of Govt bodies
- Work included data collection, data analysis, report writing, mapping (thematic and analysis), workshop conduction and stakeholder management

EDUCATION

School of Planning and Architecture, New Delhi

India

Master of Planning – Specialization in Regional Planning

July 2012 - May 2014

- Institute of National Importance; GATE Scholarship (First Class)

National Institute of Technology, Bhopal

India

Bachelor of Planning

July 2008 – April 2012

- Institute of National Importance (Distinction)

OTHER PROJECTS

- Hierarchy of Streams - Spatial analysis of natural/storm water drainage of the city and assessing stream order, watershed and basins from flow accumulation from Digital Elevation Model (hydrology analysis) - *model vetted by IISc & Govt. of Kar*
- Identified issues, gaps and prepared proposals for the Bangalore Master Plan by interacting and analysing data from 10,000+ households via primary and secondary data
- Impact of Regional Economic Growth on Spatial Development - Entailed data collection, mapping, scalogram, classification of hierarchy of settlements, supervised classification of satellite imagery using ERDAS Imagine

PUBLICATIONS

- Hari, V.*, **Dharmasthala, S.***, Koppa, A., Karmakar, S. and Kumar, R. (2021) Climate hazards are threatening vulnerable migrants in Indian megacities”, in: *Nature Climate Change*. DOI: [10.1038/s41558-021-01105-7](https://doi.org/10.1038/s41558-021-01105-7). Note: * - equal contribution. [*Published in high-impact journal, 400+ Altmetric score: in 99th percentile, 10k+ downloads, mentioned in several news media articles*]

INTERESTS & HOBBIES

- Exploring complex system science and various tools such as Agent Based Modeling, Complex Networks, its applications in real world and attending workshops
- Playing violin: Professionally trained, upskilling through Suzuki Violin method
- Blogging: building up my [blog](#) with portfolio underway with GitHub Pages and Jekyll
- Others: Travel (visited 22 States in India for travel/work); photography and editing