

# REVATHY PONNAMBALAM

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Data Scientist with intellectual curiosity and business acumen for turning problems into high quality solutions and actionable results. Seven years of experience in developing Master plans, analyzing data and managing projects in the urban planning sector and completed several data-driven projects that involved cleaning, processing, and visualizing data using various tools and technologies.

## EDUCATION

Masters in Data Science, University of British Columbia, Vancouver, Canada

Sep 22-Jun 23

- Designed, deployed and containerized various machine learning projects in the coursework. Learnt and applied concepts of hypothesis testing, A/B testing and statistical modelling in the coursework

Masters of Engineering in Transportation, College of Engineering, Anna University, India

Bachelors of Engineering in Geo-informatics, College of Engineering, Anna University, India

## ACADEMIC PROJECTS | UBC

Rainfall Prediction

Apr 23

- Deployed the machine learning pipeline using Flask API with Spark instance in AWS to predict daily rainfall

Building Permit Explorer

Mar 23

- Built interactive dashboards for analyzing Building Permit of Vancouver dataset using R and deployed the apps on shiny

BhumiNGO

Mar 23

- Built interactive dashboards for analyzing children/volunteer count using Dash, python and deployed the apps on Render

EasyPhysics, EasyPhysicsR

Feb 23

- Built and published packages in Python and R that four functions to easily calculate four classic physics theories. This reduces 80% of a teacher's effort. Deployed these packages using CI/CD pipeline

Cervical Cancer Prediction

Dec 22

- Containerized the machine learning pipeline that predicts cervical cancer using Random Forest Classifier

## TECHNICAL EXPERIENCE

Assistant General Manager | a'xykno/Hitachi solutions, India

Oct 15-Jul 22

- Led JICA-funded projects, collaborating with the Hitachi team on "Vehicle Weight Estimation" and "Optimization of Public Transport" using automatic vehicle detection through stereo cameras increasing 30% revenue to the authority.
- Employed geospatial data analysis techniques and models to improve the accuracy of vehicle weight estimation and optimize public transport routes, demonstrating expertise in project management, scoping, costing, and adherence to specifications for public sector projects as the Project Manager.
- Designed and developed GIS-based master plans, comprehensive mobility plans, and transport modeling for various central/state government projects, utilizing a data-driven approach.
- Developed and analyzed GIS thematic maps and maintained strong relationships with State/Central Government clients, regularly communicating and running meetings and workshops as needed

GIS Development Trainee | Hitachi solutions, Japan

Aug 14-Feb 15

- Maintained data accuracy/integrity in Hitachi's proprietary GIS s/w, GeoMation, by managing the geospatial database in SDE.
- Developed GIS/ITS prototypes to identify crop-cultivated areas, estimate crop yield, assess crop health, and map irrigated landscapes for agricultural land in Australia.
- Coordinated pre-disaster planning and preparedness, prediction and early warning, and damage assessment and relief management for a GIS-based Disaster Management System/Emergency Response System for the Vietnam Government, utilizing analytical skills to develop GIS prototypes that provide decision-makers with a clear understanding of crop conditions and disaster situations.

## SKILLS

Programming Languages	Python, R, Java
Databases	MySQL, MongoDB, Postgres
Data Visualization	Shiny, Dash, Matplotlib, Plotly
Data Science	Machine Learning, PyTorch, Natural Language Processing, Experimentation and Causal Inference, A/B Testing, Hypothesis Testing, Statistical analysis
Cloud and Big Data	Distributed systems, Hive, Spark, AWS - S3, EC2
Software Development	Docker, CI/CD pipeline, Flask API

## ACHIEVEMENTS

Women in Data Science Hackathon | Kaggle

Mar 23

- Used ensemble modelling along with PCA and clustering techniques to predict the longer-range weather forecasts to help people prepare and adapt to extreme weather events caused by climate change.

## EXTRA CURRICULARS

Volunteer of DataCan, Women in Data Science community

Feb 23-Present

Volunteer of Bhumi which focuses on education, civic issues, and environmental conservation.

Oct 16-Present