REVATHY PONNAMBALAM

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Seeking a challenging role as a Geospatial Data Scientist, where I can utilize my expertise in GIS, remote sensing, and machine learning to help organizations make data-driven decisions and solve complex spatial problems.

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 Renderer

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 prototype**s 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**