

R.MAHESH

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SUMMARY

Seeking opportunity as Climate Scientist/Computational Climate scientist Where Master of Computer Applications, 5years experience in IT and programming and 3.5 years experience in climate data analysis , developing applications and tools.

EDUCATION

Doctorate in Computer Science, Alagappa University,Tamilnadu,India

Master of Computer Applications, Madurai Kamaraj University, Tamilnadu, India,

Bachelor of Science, Computer Science, Madurai Kamaraj University, Tamilnadu, India.

CAREER BACKGROUND

Project Scientist - B at CCCR, Indian Insitute of Tropical Meteorology, India 2016- present

Research Scholar at Department of Computer Science Alagappa University, India. 2012-2016

Research Associate at Department of Computer Science and Engineering,Alagappa University, India. Dec 2010 – Feb 2012

Software Developer in IT companies 2005 - 2009

SKILLS SUMMARY

Skills	Level
Scripts:	
Python	Expert
Shell Script	Intermediate
R	Beginner
Visualization Tools:	
Matplotlib, Panda,Seaborn	intermediate
Paraview	Beginner
Data analysis Tools :	
NCL	Intermediate
CDO	Intermediate

File Handling:

NetCDF

Expert

GIS tool:

ARCGIS

Intermediate

Climate Models Execution:

RegCM4.7

Beginner

WRF

Beginner

TECHNICAL SKILLS

Skills	Level
Web Application Development	
PHP	Expert
Django	Intermediate
Javascript	Intermediate
API development	Expert
Relational Databases Management System	Expert
High Performance Computing	Beginner
Data Archival Management	Intermediate

SUBJECT SKILL (Low = 1 and High =5)

Skills	Level
Meteorology	2.5
Atmospheric Science	2.5
Climate Models	2.5
Probability and Statistics	3
Computer Programming Concept	5
Soft Computing	
AI	3
Fuzzy logic	3

Related Work Done

Application Development

Data Extraction Tool

It is a Web Interface based on python under development by CCCR-IITM for users to explore and remotely access subsets (some variables in a particular region for a particular time slice) of authorised datasets available on ESGF in the framework of CORDEX South Asia simulations, and download the selected subset in CSV, Text or NetCDF data formats.

Climate Services

The CCCR at IITM focus on the development of new climate modelling capabilities in India and South Asia to address issues concerning the science of climate change. CCCR-IITM has generated an ensemble of high resolution dynamically downscaled future projections of regional climate over South Asia and Indian monsoon, which will be useful for impact assessment studies and for quantifying uncertainties in the regional projections. A brief overview of this core climate change modeling activity of CCCR-IITM was presented in an Interim Report on Climate Change over India.

A application for Downscaling Regional Climate Model using RCMES(Jpl- NASA).

The statistical downscaling toolkit provided as a part of the Jet Propulsion Laboratory (JPL)'s Regional Climate Model Evaluation System (RCMES) is utilized to develop a web-based interactive application for statistically downscaling the WCRP Coordinated Regional Climate Downscaling Experiment (CORDEX) South Asia regional climate model (RCM) output to the fine-scale required for local climate impact assessments. This web-application is useful to downscale daily maximum and minimum temperature and precipitation over selected locations in India. This web-application will address the users need for correcting the errors in the RCM output that deviates from observations, using four statistical downscaling methods viz., the delta addition, delta correction, quantile mapping, and asynchronous linear regression. This user-friendly application will also enhance the visibility and utilization of CORDEX South Asia RCM outputs in the climate impacts community.

Data Archival Management

The Earth System Grid Federation (ESGF) maintains a global system of federated data centers that allow access to the largest archive of climate data world-wide. The ESGF Data Node at CCCR-IITM is focused on supporting CCCR-IITM climate model datasets (CORDEX-South Asia and CMIP6). This Data node is presently peered with [SMHI-NSC ESGF Index Node](#).

URL: http://cccr.tropmet.res.in/home/esgf_node.jsp

Contributing to Earth System Document (ES-DOC) for CMIP6

I am assigned by IITM-ESM group as the ES-DOC liaison person for CMIP6 documentation process. My responsibilities are being an interface between IITM-ESM group and ES-DOC team in CMIP6 documentation process and for documentation of IITM-ESM model running process.

Data Analysis

Reliability Ensemble Analysis : CORDEX and NEX

Modified Reliable Ensemble Analysis CORDEX and NEX

Excessive Heat Index Factor Analysis: CORDEX and IMD

Quantifying Uncertainty the Climate model using ANNOVA

Publications

An Interim Climate Change Report 2017, Govt of India.
Chapter 2. Future Climate Change Projections Over Indian Regional
<http://cccr.tropmet.res.in/home/docs/cccr/climate-change-report-2017.pdf>.

National Climate Change Report 2019 - in process, Govt of India.
Chapter : Temperature Changes in India.

Presentation

Presented a poster presentation in ICRC CORDEX 2019, Beijing , China.
Title: “RCMES-based Statistical Downscaling of CORDEX South Asia RCM output over India”

Workshops

- 1) 16th Smart and Secure Environment Workshop, CDBR, Sponsered by NTRO, New Delhi
- 2) 17th Smart and Secure Environment Workshop, CDBR, Sponsered by NTRO, New Delhi
- 3) 19th Smart and Secure Environment Workshop, CDBR, Sponsered by NTRO, New Delhi
- 4) 20th Smart and Secure Environment Workshop, CDBR, Sponsered by NTRO, New Delhi
- 5) 7th Indo – Australian Conference on IT security participated on 11th April 2011
- 6) One day workshop on “Research Methodologies in Computing Science, Information Technology and Engineering” ,29th Nov 2011
- 7) International Workshop on Cryptography and Information Security, 26th &28th Oct 2012
- 8) CSIR Sponsored National Level Workshop on Big Data Analytics,19th,20th Sep 2014.
- 9) Two day National Level Workshop on Data Mining and Big Data Analytics,15th & 16th Sept 2015

Training Programmes

1. Two days Awareness Program on e-Content Development for College Teachers, 27th & 28th Sept 2010
2. Five days Training programme on Academic Research Writing ,21st-23rd &25th -26th April 2014
3. One day User Awareness Programme on Accessing of Electronic Resources under UGC-INFONET Digital Library Consortium, 25th July 2014

Given Hands on Training

Technical Support team for the Science and Training workshop on Climate Change over High Mountains of Asia held at IITM during 8-12 October 2018, and have given hands on training to work out the data extraction tool and climate scenario application. I have supported to the hand on exercise by guiding the workshop participants in installing and executing the software packages for statistical climate data analysis and visualization. I was also a participant for this workshop, which helped me in gaining better understanding of climate data analysis and applications.

Committee Members

- Technical Committee Member in Indo-US Workshop on development and applications of downscaling Climate projections, 7-9 March 2017, Indian Institute of Tropical Meteorology.
- Technical Committee Member in Indo-US Workshop on development and applications of downscaling Climate projections, 7-9 March 2017, Indian Institute of Tropical Meteorology.
- Technical Committee Member in International Conference on Innovations in Computer Science and Technology, April 4 -5, 2016,
- Technical Team Member in MINDS 2014 Conference, 27-28 March 2014.

References

Dr. R.Krishnan, Scientist 'G'
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