

AKASH. S (AKASH SOMASEKHARAN)

Data Scientist / Researcher

Earth Science, Medical, Business, Finance, Bioinformatics, Agriculture, +

📍 Punnayil (H), Muthukulam (N) P.O, Alappuzha District- Pin: 690560, Kerala, India
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GitHub: <https://github.com/akashspunnayil/ClimoMarineLab.git>
ResearchGate: <https://www.researchgate.net/profile/Akash-Somasekharan>
LinkedIn: [linkedin.com/in/akash-s-1a68868b](https://www.linkedin.com/in/akash-s-1a68868b)



PROFILE

Data scientist with over 7 years of experience in data analysis, scientific programming, and cross-domain research. Proven expertise in exploratory data analysis (EDA), statistical modeling, and machine learning for solving real-world problems using structured and unstructured datasets. Adept at translating complex data into actionable insights through clean code, reproducible workflows, and impactful visualizations.

SKILLS & EXPERTISE

- Data analysis and Reporting
- Statistical analysis & modelling
- Data analysis, Scientific programming and Predictive modelling (ML/DL)
- Cruise-based hydrography (CTD, RBR, onboard sampling)
- High-Performance Computing (HPC) & Cloud Computing experience and Big Data Management
- Scientific communication & collaboration

PROGRAMMING & SCRIPTING

- Python (data wrangling, visualization, ML, automation)
- R (statistical analysis, GAM)
- FERRET (oceanographic analysis)
- FORTRAN (model configuration & legacy scripts)
- Shell scripting (batch processing, HPC automation)

SOFTWARE & TOOLS

- QGIS, ArcGIS – geospatial mapping
- Git / GitHub / GitLab
- SEAScope, Panoply – model & remote sensing visualization
- Microsoft Office and LaTeX – documentation & reporting

OPERATING SYSTEMS

- Linux (Bash, remote compute, HPC jobs)
- Windows

LANGUAGES

- English (fluent – written & verbal)
- Hindi (professional working proficiency – written & verbal)

RESEARCH INTERESTS

Earth Science, Medical, Business, Finance, Bioinformatics, Agriculture, Artificial Intelligence

EDUCATIONAL QUALIFICATIONS

- **Ph.D. in Physical Oceanography** (Jan 2021 – Ongoing)
KUFOS, Kochi, India
- **Integrated B.Sc.–M.Sc. in Climate Change Adaptation** (2013 – 2018)
ACCER (now CCCES), KAU, Thrissur, India - Overall: 72.6% (B.Sc.: 70%, M.Sc.: 78%)
- **Higher Secondary (Plus Two) – Bio, Maths, Chem** (2011 – 2013)
HSS Muthukulam, Kerala, India – 74%
- **SSLC** (2010 – 2011)
Kopparethu HS, Alappuzha, Kerala, India – 87%

CERTIFICATIONS & DIPLOMAS

- **Professional Diploma in Artificial Intelligence**
IPCS Global, Kochi, India | June 2024 – Ongoing
- **Sail Training & Scientific Crew Certificate**
Statsraad Lehmkuhl Expedition (Maputo to Cape Town) | Jan 3–13, 2023
- **Modeling Training – HYCOM-ECOSMO**
NERSC, Bergen, Norway | May 21 – June 19, 2022

PROFESSIONAL EXPERIENCES AND PROJECTS

- **Senior Research Fellow – EU H2020 COMFORT Project**
NERCI, Kochi, India | Apr 2022 – Jan 2024
- **Junior Research Fellow – EU H2020 COMFORT Project**
NERCI, Kochi, India | Mar 2020 – Mar 2022
- **Young Professional-II – ICAR-NICRA Project**
CMFRI, Kochi, India | Apr 2019 – Mar 2020
- **Highly Skilled Staff – Fisheries Research Project**
CMFRI, Kochi, India | Sep 2018 – Mar 2019
- **M.Sc. Thesis Student – Fisheries Oceanography**
CMFRI, Kochi, India | Oct 2017 – Aug 2018

FREELANCE CONSULTING, PROJECTS AND BLOGS

Delivered analytics and scripting support for M.Sc./Ph.D. students and researchers across academic and applied domains using Python.

Recent Projects:

- **Air Pollution Hotspot Tool** – CLI/Jupyter-based ranking of urban hotspots using thresholds.
- **Water Quality Analysis** – Automated scripts for spatiotemporal survey data reporting.
- **Car Price Prediction** – ML models and dashboards for pricing insights.
- **Diabetes Risk Classifier** – Supervised learning for risk prediction with PDF outputs.
- **argohycom-toolbox** – Python module for BGC Argo-HYCOM colocation.
- **Sea Level Trend Detector** – Sliding window algorithm for spatial change analysis.
- **Technical Writing & Blogs** –
<https://aireenproject.wordpress.com/category/python-classes/>

REFERENCES

- Dr. Grinson George, Director, CMFRI, Kochi, India
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- Dr. K. Ajith Joseph, Exec. Director, NERCI, Kochi, India
ajith_jk@yahoo.com
- Dr. Annette Samuelsen, Research Leader, NERSC, Bergen, Norway
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