Krishna Rao

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EDUCATION

- Ph.D. in Earth System Science, Stanford University, USA *2018-Jun, 2022*
  - GPA: 3.91/4.00 — Data-driven forest health monitoring
- M.S. in Civil and Environmental Engineering, Stanford University, USA *2016-2018*
  - GPA: 3.78/4.00 — Specialization in Environmental Fluid Mechanics and Hydrology
- B.Tech. with Honors in Civil Engineering, IIT Madras, India *2010-2014*
  - GPA: 9.02/10.00 — Ranked 1 among 100 students in Department. 1 among 7 students to receive Honors

INDUSTRY

AI Resident, Google X (The Moonshot Factory) Location: Mountain View, CA *Jun-Sep, 2021*

- Led part of a moonshot for ML-based forecasting of changing environmental conditions at high fidelity Blog
- Filed patent as co-inventor for "Training machine learning models using intermittent data" (team of 3)
- Improved forecasting of an environmental risk by 354% from state-of-the-art with decision trees (team of 2)
- Co-developed primary data pipeline for delivering ≥1 TB rasters and vectors from 40+ sources (team of 5)

SWE Intern, Valor Water Analytics Location: San Francisco, CA *Jun-Sep, 2017*

- Improved precision of water meter sizing by 12% from baseline using pattern recognition of time series
- Designed and built the first-ever storm water rate simulator for New York City; in use by NYC DEP Simulator

Field Engineer, Schlumberger Ltd. Locations: UAE & India *2014-2016*

- Planned and delivered 100+ oil and gas well profiling and perforation operations with a clean safety record
- Accelerated decisions during trouble-shooting downhole robots with limited information to save $10k+/hour
- Awarded Best Team Player for building open communication practices among 18 teammates

RESEARCH

Location: Stanford, CA *2017-2022*

- Published 7 peer-reviewed papers with 150+ citations on data-driven insights of the Earth system Publications
- Founded a data-driven wildfire hazard prediction model- a big shift from poorly-parametrized physical models
- Developed geospatial physics-assisted ML algorithms for drought-driven tree mortality and wildfire hazard
- Pioneered open science with interactive apps Forest dryness dashboard, Species identifier chatbot, Damaged buildings detector
- Motivated diverse audiences for data-driven ecohydrology modeling through 15 presentations Talks & Videos

HONORS

- NASA Earth and Space Science Fellow, among 56 chosen out of 423 applicants ($135K funding) *2018-2021*
- Stanford Data Science Scholar, among 11 chosen out of 151 applicants ($100K funding) *2020-2022*
- Reviewer, Climate Change AI Innovation Grants, $1.8M program for climate change research using AI *2021*
- AWS Cloud Credits award for improved wildfire hazard monitoring using deep learning ($8K grant) *2019*
- Three-time hackathon winner: TreeHacks, Big Earth Hackathon @ Stanford, and Geo for Good @ Google
- Outstanding Achievement in Mentoring award from Stanford University for under-graduate mentorship *2019*
- Two-time Community Impact Award winner for public speaking initiatives at Stanford University *2018, 2021*

OUTREACH

Published articles on AWS Blog, Stanford Data Science, Towards Data Science, Earth.org, etc. Blog