SUMAN GAJUREL

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I am detail-oriented agriculture scientist with expertise in soil and crop science, soil degradation identification and management, agricultural systems modelling, big data analysis, and data presentation. Dedicated to collaborating with cross-functional teams to address research and agricultural issues, delivering high-quality strategic solutions to overcome challenges and drive growth.

EXPERIENCE

RESEARCH ASSISTANT

University of Southern Queensland | Toowoomba, QLD | 2024 JULY

- Collecting sesame crop data from glasshouse experiment at UniSQ, Toowoomba.
- Organise raw data from trial sites at Emerald, Tully, Kununurra, and Katherine into a usable format.
- Develop APSIM simulations for all sites and years to calibrate and validate the sesame crop model.
- Predicting soil properties information using pedo-transfer functions to feed into APSIM simulation.
- Running APSIM simulations for sesame crops under various farm management scenarios.

DOCTORAL RESEARCHR

University of Southern Queensland | Toowoomba, QLD | 2021 – 2024 JUNE

- Collating farm management data and soil test data from various sources including government agencies and organise it into a usable format.
- Building APSIM simulation for paddocks located across grain growing regions.
- Writing R scripts to optimise soil properties of APSIM in R environment to predict soil hydraulic parameters.
- Writing PBS scripts to run APSIM optimisation function in High Performance Computing environment.
- Extracting environmental and soil properties data from national databases.
- Writing R scripts to analyse big data and to build machine learning models for multiple soil chemical properties to diagnose chemical constraints.
- Scientific paper writing for each outcome, report writing and conference presentations.

RESEARCH AGRONOMIST

Kalyx Australia | Perth, WA | 2019 – 2020

- Collecting and analysing data and samples of produce, feed and soil from herbicide trials.
- Providing onsite agronomic and technical support
- Identifying agricultural problems and researching procedures and techniques to solve them.
- Promote branch staff upskilling by providing technical advice and product recommendations.
- Keeps records of research, testing, and results
- Prepares analysis and data presentation

AGRONOMIST

SLISA Nepal | Kathmandu | 2016 – 2018

- Provide agronomic advice to farmers
- Agronomic and technical support on insect and disease management
- Identifying agricultural problems and provide chemical and fertiliser recommendation
- Promote branch staff upskilling by providing technical advice and product recommendations.
- Establish, develop and maintain clients, government and stakeholder relations

EDUCATION

PhD, Agriculture Science, JULY 2024

Joint PhD University of Southern Queensland (UniSQ), Queensland and Soil CRC

MSc (Dryland Agricultural Systems), Digital Soil Mapping, DEC 2020

Curtin University, WA, Australia

BSc (Hons) Agriculture, Plant Protection, 2016

Purbanchal University, Kathmandu, Nepal

TECHNICAL SKILLS

- **Ag system model:** APSIM, ARM Online, GYPSY
- **Programming language:** R programming

KEY STRENGTHS

- Technical proficiency
- Collaborative team player
- Problem solving skills

- **Tools:** Git, Vs Code, High performance computing (HPC), Overleaf (Latex), Zoom, Microsoft teams, SPSS

- Attention to detail

CERTIFICATES

- **Soil Judging Competition** – Dec 1, 2, & 3, 2022, Soil Science Australia
- **Hands-on Digital Soil Mapping** – May 2021, ISRIC
- **Satellite Remote Sensing for Agricultural Applications** – Apr 14, 21, 28 & May 5, 2020, NASA
- **Introduction to Remote Sensing** – 06 April, 2020, GEO University
- **Biometrics and Experimental Designs in Agriculture** - Dec 01 to Dec 05. 2017, California State University, Fresno, USA
- **Organizational Management and Leadership -** 08 - 10 April, 2017, National Youth Federation, Nepal

AWARDS AND SCHOLARSHIPS

- Soil CRC Research Scholarship
- University of Southern Queensland (UniSQ) Research Scholarship

PUBLICATIONS

- A cost-effective approach to estimate plant available water capacity. Link https://doi.org/10.1016/j.geoderma.2024.116794
- Cubist modelling for predicting chemical soil properties across grain growing regions of Australia **[In Review]**
- Performance comparison of machine learning models for predicting of soil chemical properties **[In Review]**
- Cost-effective approach to estimate plant available water capacity **[Presentation].** Link https://conference.soilscienceaustralia.org.au/wp-content/uploads/2023/06/2023-SSA-Oral-Abstract-Book.pdf