NISHA PAUDEL

PhD student

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ABOUT ME

I am a researcher with a demonstrated ability to quickly grasp and adapt to dynamic environments, I offer robust skills in statistical data modelling and machine learning. My track record includes efficiently building relationships with researchers, academics, and industry professionals. Currently, I am a PhD student at Deakin University.

EXPERIENCE

11/2022-11/2023 **PhD student** **Deakin University**

- Project: Geospatial Modelling of *P. falciparaum transmission networks in Papua New Guinea*
- Roles: Qunatitative PCR, Variant calling using GATK best practices

11/2022-11/2023 **Post Graduate Researcher** **RMIT University**

- Project: Bioinformatics Analysis of Tertiary Phase Glia in Preterm Brain Injury
- Roles: Academic writing, RNA sequencing data analysis, statistical modelling and probabilistic inferences

10/2021-10/2022 **Research Associate** **NAAMII, NepAl Applied Mathematics and Informatics Institute for Research**

- Project: Observation of dinucleotide pattern in eukaryotes.
- Roles: Design the study, Coding and data analysis, and writing the manuscript, Conduct a workshops and trainings for undergrad students on Data Analysis

11/2020 - 7/2021 **Research Trainee** **CSIR-CCMB, Council of Scientific and Industrial Research- Centre for Cellular and Molecular Biology**

- Project: Evolution of 5mC DNA methylation in Metazoans
- Training: De novo Genome assembly, RNA-seq, ChIP-seq, Bisulfite-seq data analysis
- Roles : Python scripting for data curation, analysis and visualization, Meta data analysis on genomics and epigenomics

SKILLS

Bioinformatics Skills:

- R and Python programming languages for data analysis
- Proficiency in the use of the Linux command line, bash scripting and Git
- Monitoring the quality of data, data normalisation, statistical modelling and probabilistic inferences
- Designing, analysing and interpreting data from high-throughput sequencing platforms on transcriptomics, genomics and epigenomics
- Pathway analysis and molecular docking
- Cloud computing experience
- Knowledge of workflow management tools such as snakemake and NextFlow
- Reproducible code with detailed SOPs and document results

Laboratory Skills:

- Sample processing, RNA/DNA extraction, ELISA, Conventional PCR, rt2-PCR
- Calibration and maintenance of instruments
- Demonstrated Good Laboratory Practice (GLP)
- Microbial staining, biochemical tests, microscopy and microbiota profiling

Management Skills:

- Demonstrated interpersonal skills
- Effective written and verbal communication and presentation skills
- Demonstrated ability to provide technical support and event organizer
- Proficiency in managing multiple workflows, priorities and meet deadlines
- Risk assessment and conflict situation handling

EDUCATION

8/2018 - 11/2020 **Master of Science in Biotechnology** **Bangalore University, Department of Biotechnology**

- Thesis title: "Network Pharmacology of Lycopene and Molecular Docking with Top Hub Proteins"
- **Project Synopsis:** In this project, we explored how lycopene, the antioxidant responsible for the red color in fruits, interacts with different pathways and how it forms bond with proteins in the pathways. I utilized computational tools like Cytoscape and Molecular Docking for this investigation. Various databases, such as CTD, STITCH, and STRING, were employed to mine the genes build a network of genes. Additionally, gene ontology was performed to understand the functional characteristics of lycopene.

8/2013 - 10/2017 **Bachelor of Science in Microbiology** **Tribhuvan University, Padma kanya Campus**

- Thesis title: "Prevalence of Multi-Drug Resistant Bacteria on Environmental and Medical-Device Surfaces
- **Project Synopsis:** In this project, we undertook microbial monitoring of environmental and medical device surfaces. This evaluation serves the dual purpose of assessing the effectiveness of routine cleaning practices while also detecting the presence of specific Nosocomial Pathogens. The prevalence of Multidrug-Resistant organisms within hospital premises poses significant challenges. We conducted a cross-sectional descriptive research initiative, the study took place in the pathology laboratory of Korea Nepal Friendship Hospital.

AWARDS

11/2024 - present **Ph.D. scholarship by RMIT University**
Received Ph.D. scholarship by Deakin University, School of Medicine

8/2018 - 10/2020 **Silver Jubilee Scholarship Scheme (SJSS)**
Indian Council of Cultural Relations (ICCR) A competitive scholarship based on academic merit awarded by the Government of India for pursuing the master's course in India, fully funded including flight, monthly stipend, tuition fee and contingency expenses.

PROFESSIONAL MEMBERSHIP

1/2023 - 1/2024 **COMBINE Australia Committee : Training and Events Co-ordinator** **https://www.combine.org.au/about-us/**
Conducted several workshops and social events for Bioinformatics students from all over the Australia

3/2025 - present **Australian Society for Parasitology : Student member** **https://www.combine.org.au/about-us/**
Conducted several workshops and social events for Bioinformatics students from all over the Australia

PREPRINTS

- Network pharmacology of lycopene and Molecular Docking with Top Hub Proteins: N Paudel, U Hani, NP Awasthi, M Hanumantappa, R Lakshminarayan: **https://doi.org/10.1101/2021.03.04.433249** Roles : Data mining, making pipelines, conducting analysis, data visualisation and writing manuscript

REFEREES

Available upon request.