

# SUJAN POKHAREL

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## EDUCATION

- Kathmandu University** Dhulikhel, Kavre, Nepal  
*Masters of Science in Computational Mathematics* March 2024 - Present  
*Courses:* Linear Algebra, Advanced Calculus, Statistics and Probability, Analysis-I, Matrix Theory, Analysis-II, Computational Statistics, Mathematical Modelling  
*Awards & Achievements:* University Grant Commission Scholarship
- Kathmandu University** Dhulikhel, Kavre, Nepal  
*Bachelor of Science in Computational Mathematics ; GPA: 3.52/4.00* August 2018 - May 2023  
*Courses:* Linear Algebra, Advanced Calculus, Statistics and Probability, Analysis-I, Matrix Theory, Analysis-II, Computational Statistics, Mathematical Modelling  
*Awards & Achievements:* Merit Scholarship (Full tuition waiver for two years), Academic Excellence \* 3

## WORK EXPERIENCE

- Kathmandu University** Dhulikhel, Nepal  
*Graduate Teaching Assistant* October 2024 - Present
  - Assisted in teaching undergraduate course [MCSC 202]
  - Conducted tutorial sessions, graded assignments and exams, and provided academic support to students
  - Contributed to developing teaching materials, including slides and lab manuals
  - Supervised undergraduate student projects, providing guidance on research, implementation, and documentation
- Numeric Mind** Kathmandu, Nepal  
*Data Analyst* April 2023 - September 2024
  - Utilized Microsoft Excel, SAS, and R for comprehensive data cleaning and transformation to maintain data integrity and ensure analytical readiness.
  - Built Python scripts (pandas/NumPy) to automate data validation and reporting, reducing manual effort.
  - Developed SDTM and ADaM datasets in SAS and R, adhering to CDISC standards, and worked closely with Principal Statistical Programmers on regulatory submission deliverables.
  - Produced Tables, Listings, and Figures (TLFs) in alignment with the Statistical Analysis Plan (SAP), supporting data accuracy and reproducibility of results.
  - Delivered training and provided ongoing guidance to interns in SAS programming best practices and project workflows.
  - Automated clinical data workflows using SAS macros, improving efficiency in TLF generation

## PROJECTS

**Computational Modeling of Traditional Brick Kilns and Their Environmental Impact in Nepal** August 2025 - Present

- Developing a CFD-based model of traditional brick kilns to analyze heat transfer and pollutant dispersion.
- Assessing environmental impacts of emissions compared to air quality standards.

**Modeling COVID-19 Dynamics in Nepal: SEIQR Compartmental Model with Quarantine**

March 2024 - January 2025

- Developed an SEIQR epidemiological model and conducted sensitivity and stability analysis.
- Implemented the fourth-order Runge-Kutta (RK4) method in Python to solve the system of differential equations.
- Utilized COVID-19 data from Nepal for model calibration and validation.

## PUBLICATIONS

- Modeling COVID-19 Dynamics in Nepal: SEIQR Compartmental Model with Mortality and Quarantine [DOI](#)
- On optimizing travel routes in Kathmandu Valley, Nepal using genetic algorithms [DOI](#)

## CERTIFICATION

- SAS Certified Specialist: Base Programming Using SAS 9.4 (July 2023) - [Certificate](#)

## SKILLS SUMMARY

- Languages** SAS, SAS Macros, Proc Report, R, SQL, Power BI, Python, C, C++, MATLAB
- Software** Microsoft Excel, Powerpoint, Photoshop
- Statistics** Time Series, PCA, Clusters, Hypothesis tests, Statistical Inference
- Attributes** Receptive, Independent, Self-starter, Teamwork, Adaptable, Multi-tasking