SUWASH SILWAL

2010 Woodmar Dr., Houghton, MI 49931

+1-906-275-9153 ⋄ suwashs@mtu.edu ⋄ in/suwash

EDUCATION

Michigan Technological University, Houghton, MI, US *Expected July 2026*
Ph.D. in Statistics
Advisor: Prof. Xiao Zhang

Michigan Technological University, Houghton, MI, US *December 2023*
M.S. in Statistics

Tribhuvan University, Kathmandu, Nepal *December 2016*
M.S. in Statistics
Supervisor: Prof. Pravat Uprety

Tribhuvan University, Kathmandu, Nepal *July 2013*
B.S. in Statistics

RESEARCH EXPERIENCE

Graduate Research Assistant, Michigan Technological University Jan 2021 – Present
Houghton, MI

· Bayesian modeling for nominal measures with missing values using the Multinomial Probit(MNP) model.
Developed a parameter-expanded (PX) data-augmentation Gibbs sampler that improves posterior mixing and convergence, increasing estimation accuracy.

· Extended the MNP framework to multivariate and longitudinal (panel) settings.
Integrated missing data within a PX-Gibbs sampler with simulations and real data applications.

Data Analyst/Statistician, Solutions Consultant Dec 2017 – Jul 2021
Kathmandu, Nepal

· Led data modeling and analysis for large survey-based projects funded by international organizations (NORC, World Bank, IRI, etc).

· Designed sampling plans, questionnaires, and statistical reporting frameworks that ensured methodological rigor and actionable insights for policy clients.

TEACHING EXPERIENCES

Graduate Teaching Instructor, Michigan Tech Aug 2021 – Dec 2023
Houghton, MI

· Instructor of Undergraduate Engineering Statistics and Precalculus.

· Designed exams, problem sets, and auto-graded quizzes via Canvas, iClicker, and Gradescope.

· Provided lecture notes and worked examples; aligned weekly learning outcomes, in-class activities, and homework.

· Ran lab sessions in the classroom using R(statistical test, modeling, visualization) and MATLAB (matrix algebra, optimization) to connect theory to computation.

· Provided targeted office hours and review sessions.

Teaching Instructor(Part-time), Amrit Campus   Dec 2017 – Jul 2021
Kathmandu, Nepal

· Instructor of undergraduate courses (Survey Statistics, Demography) and graduate courses (Biostatistics, Research Methodology).
· Supervised undergraduate projects, helping students apply statistical methods to real-world datasets and refining their presentation skills.
· Developed teaching materials and coordinated lab sessions.

RESEARCH INTERESTS

- Bayesian computation for latent variable models

- Multivariate data analysis

- Missing Data imputation

TECHNICAL SKILLS

R, Python, SQL, SAS, Panda, Numpy, Machine Learning, Neural Network, A/B Testing, Data Visualization, Data Wrangling, R-Shiny, Distributed Computing, HPC, MCMC simulation, Generalized Linear Model(GLM), Research, Bayesian Modeling, Missing Data Imputation.

TRAINING

Jun 1-7, 2025	IMSI Summer Data Science Bootcamp (online)
	University of Illinois, Champaign, IL

CONFERENCE PRESENTATIONS

Aug 2–7, 2025	**Joint Statistical Meetings (JSM)**, Nashville, TN, USA
	Bayesian Methods for Analyzing Nominal Measures with Missing Values Using Multinomial Probit Models.
Aug 3–8, 2024	**Joint Statistical Meetings (JSM)**, Portland, OR, USA
	Parameter-Expanded Data Augmentation for Analyzing Categorical Data Using Multinomial Probit Models.
Jun 4–7, 2024	**Symposium on Data Science & Statistics (SDSS)**, Richmond, VA, USA
	Parameter-Expanded Data Augmentation for Multinomial Probit Models.

GRANTS & AWARDS

Spring 2026	**Dean's Award for Outstanding Scholarship**. Michigan Technological University Houghton, MI
August 2025	**American Statistical Association(ASA) Student/Early Career Travel Award**. **$400** - to present at the *Joint Statistical Meetings(JSM) 2025*, Nashville, TN.
August 2025	**Graduate Student Government(GSG) Travel Grant**, Michigan Technological University. **$500** - to present at the *Joint Statistical Meetings(JSM) 2025*, Nashville, TN.
June 2024	**Graduate Student Government(GSG) Travel Grant**, Michigan Technological University. **$500** - to present at the *Symposium on Data Science & Statistics(SDSS) 2024*, Richmond, VA.

PUBLICATIONS

- Suwash S. & Zhang X. (2025). Parameter-Expanded Data Augmentation for Analyzing Discrete Nominal Measures with Missing Values Using Multinomial Probit Models (*submitted*)

- Silwal, S., & Uprety, P. (2019). Assessment of oral health knowledge, attitude and practice among school children in kathmandu metropolitan city, nepal. *RRJoST*, *8*, 1–10.

PROFESSIONAL MEMBERSHIP

American Statistical Association(ASA)

LEADERSHIP & INVOLVEMENT

2023 – 2024	**President**, Nepali Student Organization (NSO), Michigan Technological University
2022 – 2023	**Vice President**, Nepali Student Organization (NSO), Michigan Technological University

REFERENCES

- **Xiao Zhang, PhD**
  Associate Professor, Mathematical Sciences
  Michigan Technological University
  Email: xzhang35@mtu.edu

- **Kui Zhang, PhD**
  Professor, Mathematical Sciences
  Michigan Technological University
  Email: kuiz@mtu.edu

- **Qiuying Sha, PhD**
  Professor, Mathematical Sciences
  Michigan Technological University
  Email: qsha@mtu.edu

- **Philip Kendle**
  Associate Teaching Professor, Mathematical Sciences
  Michigan Technological University
  Email: kendall@mtu.edu