

Aastha Pudasainee

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RESEARCH AREAS

- Environmental & Resource Economics; Environmental Compliance Researcher; Regulatory Compliance & Enforcement; Weather-Hydrology Interactions; Critical Mineral Supply Chains

EDUCATION

- **Ph.D. in Economics**, *University of Nevada, Reno Reno, NV* 2024 – Present
Expected Graduation: May 2028
- **M.S. Agricultural & Applied Economics**, *Virginia Tech Blacksburg, VA* 2022 – 2023
- **M.S. Agricultural, Food & Resource Economics**, *Michigan State University East Lansing, MI* 2020 – 2022
- **B.S. Agriculture**, *Himalayan College of Agricultural Sciences and Technology Kathmandu, Nepal* 2014 – 2018
 - **Minor:** Agricultural Economics & Business Management

SKILLS SUMMARY

- **Machine learning:** Advanced Applied Economic Analysis
- **Programming:** Python, R, Stata, MATLAB, SPSS, LaTeX, QGIS
- **Big Data:** EPA ICIS-NPDES, ECHO, PRISM climate data; panel construction; HUC-12 watershed datasets, Handling massive datasets (multi-million observations)
- **Big Data engineering skills** Chunking, panel data merging.
- **GIS:** Experience integrating geospatial datasets (PRISM climate data, HUC-12 watersheds, ICIS-NPDES outfalls) using GIS and coordinate-based matching.
- **Econometric Tools:** Ngene, NLogit (Discrete choice modeling)
- **Software:** Excel, Canva, Jira
- **Dynamic Optimization:** Dynamic Programming using MATLAB
- **Economic Modeling:** Developing firm-level utility and cost-minimization models for environmental compliance decisions, including extensions with Bayesian updating when uncertainty is present.
- **Design Thinking:** Experience with problem-framing, prototype development, and innovation business solutions (Impact Week Kathmandu; Do-Camp Nepal).
- **Infographics:** Designing clear, data-driven infographics and outreach materials using Canva.
- **Languages:** English (Fluent), Nepali, Hindi, Urdu

RESEARCH EXPERIENCE

- **University Consortium for Economic Development — Nevada Tech Hub** June 2025 – Present
Reno, NV
 - **Graduate Research Assistant**
 - **Critical Minerals:** Analyzing lithium, cobalt, nickel, manganese supply-chain vulnerabilities and midstream bottlenecks
 - **EDA Strategy:** Supporting workforce & economic development planning for Nevada Tech Hub
- **Virginia Tech** June 2022 – July 2022
Blacksburg, VA
 - **Research Assistant**
 - **Willingness to Pay Analysis:** Solar streetlight valuation study in Vietnam
- **Michigan State University** 2020 – 2022
East Lansing, MI
 - **Research Assistant**
 - **Projects:** Agricultural markets, food systems, environmental economics
 - **Data:** Survey, experimental, and statistical dataset management
- **Nepal Agricultural Research Council** June – December 2018
Kathmandu, Nepal
 - **Research Intern**
 - **Supervisor:** Prof. Dr. Yuga Nath Ghimire, Chief & Senior Scientist
 - **Work:** Socioeconomic & agricultural policy analysis

TEACHING EXPERIENCE

- **University of Nevada, Reno** Spring 2025
• *Teaching Assistant* Reno, NV
 - **Courses:** Principles of Statistics; Principles of Microeconomics
 - **Tasks:** Discussion sections, grading, office hours, student support
- **University of Nevada, Reno** Fall 2024
• *Teaching Assistant* Reno, NV
 - **Courses:** Econometrics; Intermediate Microeconomics
 - **Tasks:** Grading, course support, creating review materials
- **Virginia Tech** Fall 2023
• *Teaching Assistant* Blacksburg, VA
 - **Courses:** Macroeconomics, Agribusiness, Entrepreneurship
- **Virginia Tech** Fall 2022
• *Teaching Assistant — AAEC 3324* Blacksburg, VA
 - **Course:** Environment & Sustainable Development Economics
- **HICAST, Nepal** 2020
• *Instructor* Kathmandu, Nepal
 - **Economics Course:** Agricultural Resource and Marketing Management

CURRENT RESEARCH

- **Effect of local and upstream watershed temperature and precipitation on wastewater compliance.**
- *Research Supervisors:* Dr. Levan Elbakidze (External) and Dr. Michael H. Taylor
- **Wastewater Compliance, Enforcement, and Supply-Chain Stability in the U.S. Critical Minerals Loop.**
- *Research Supervisor:* Dr. Michael H. Taylor

PEER-REVIEWED PUBLICATIONS

- Malone, T., Swinton, S. M., **Pudasainee, A.**, & Bonito, G. (2022). *Economic Assessment of Morel (*Morchella spp.*) Foraging in Michigan, USA*. Economic Botany.
- **Pudasainee, A.**, Chaulagai, T. R., Ghimire, Y. N., & Chaulagain, B. P. (2018). *Drivers of Transition from Export to Import of Rice in Nepal*. Nepalese Journal of Agricultural Sciences.
- **Pudasainee, A.**, Pudasaini, U., & Chaulagain, B. P. (2020). *Prospects of ICT-Based Agricultural Technology in Nepal*. Nepalese Journal of Agricultural Sciences.

OTHER PUBLICATIONS

- **Pudasainee, A.** (2022). *Exploring the Extent of Market for U.S. Mushroom Production Expansion*. Master's Thesis, Michigan State University.
- **Pudasainee, A.** (2019). *Study on the Transition from Export to Import of Rice in Nepal*. Undergraduate Thesis.
- **Pudasainee, A.**, & Ojha, R. B. (2017). *Climate Change: Policy and Politics*. World News of Natural Sciences, Poland.

TECHNICAL REPORT

- *A Meta-Analysis of the Critical Mineral Supply Chain in the United States and Opportunities for Nevada in the Lithium Loop* (2025/26-05).
Authors: Robyn Brunscher, Minh Nguyen, Richard Bartholet, Andrew Clutts, Ron Lembke, Jennifer Ott, **Aastha Pudasainee**, and Frederick Steinmann.

CONFERENCES, WORKSHOPS & SEMINARS

- **AAEA Annual Meeting, Anaheim**: Poster Presented — *Economic Assessment of Morel Foraging* (July–Aug 2022)
- **Michigan Ag Credit Conference**: Poster Presented — Morel Foraging Economics (Oct 2021)
- **Nevada Tech Hub All-Consortium Meeting, University of Nevada, Reno**: Attendee — Joe Crowley Student Union, Reno, NV (Oct 23, 2025)

TECHNICAL COMPETENCIES & TRAININGS

- **Impact Week Kathmandu**: Design thinking challenge and workshop Lufthansa Group Germany & Maker Valley (Nov 2019)
- **Do-Camp: Innovation for Impact**: Business, Community, and Social Innovation Nepal (BUCSBN), King's College Kathmandu (Oct 2018)

LEADERSHIP & SERVICE

- **Nepali Student Association, UNR** 2024 – Present
Treasurer Reno, NV
- **Nepalese Student Association, MSU** 2021 – 2022
Secretary East Lansing, MI
- **SCOLAR Kathmandu Team** 2020
Project Lead Kathmandu, Nepal

HONORS, SCHOLARSHIPS & AWARDS

- Merit scholarship for bachelor's degree (Highest scorer, Rank 1) — Purbanchal University entrance exam, HICAST College.
- Impact Week Challenge Kathmandu 2019 — Third Prize winner as team "Roots," hydroponics-based agricultural innovation.
- Second position — TSAN Blog Competition (2017), "Uplifting Nepal's Rural Smallholder Farmers."

EDITING EXPERIENCES

Editor — *HICAST Research Abstracts*, Volume 9 (2019).

Editor — *HICAST News Round-Up*, Issue 7 (2019).

ACADEMIC & PROFESSIONAL MEMBERSHIPS

- Agricultural and Applied Economics Association (AAEA)
- Association of Environmental and Resource Economists (AERE)
- Association of Nepalese Agricultural Professionals of America (NAPA)
- Nepal Agricultural Economics Society (NAES)