

PUKAR BHANDARI

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🎓 Education

University of Utah

May 2023

Master of City and Metropolitan Planning (GPA: 4.00 / 4.00)

Salt Lake City, UT

- Specialization in land use, transportation, and smart growth with interest in GIS and geospatial data analytics
- **Coursework:** Transportation Planning, Transportation Analysis Methods, Land Use and Transportation, Advanced Geospatial Analysis, Big Data in Transportation
- **Projects:** Salt Lake City Parking Study; Traffic Impact Study at 2100S/2100E; Built Environment Determinants of Walking and Biking Safety; Accessibility Analysis of Transit Equity; 15-Minute Salt Lake City: Proximity Analysis; Bicycle Sharing Station Suitability Analysis; see website for full portfolio

Tribhuvan University, Institute of Engineering

August 2018

Bachelor's Degree in Architecture (GPA: 81%)

Kathmandu, Nepal

- **Coursework:** Building Construction and Services, Surveying, Estimating and Costing, Construction Management, Landscape Architecture, Computer Aided Design & Drafting, Geographic Information System
- **Projects:** Earthquake Memorial at Barpak (Thesis), Conservation Masterplan for Historic Nuwakor Palace, Resettlement Plan for Barpak; Cafeteria at IOE, Pulchowk Campus (Design Competition, Runner Up)

🧰 Experience

Metro Analytics

Atlanta, GA

Transportation Planner/Analyst - Full Time

Jun 2023 – Present

- Conducted research and analysis to advance transportation decision-making, including evaluating economic, social, safety, and equity impacts, developing best practices, and implementing innovative planning strategies.
- Utilized transportation performance metrics, safety data, economic statistics, modeling platforms, and GIS to analyze and visualize system performance and accessibility, while producing high-quality consulting deliverables such as reports and presentations.
- Collaborated with diverse stakeholders, mentored junior staff, and participated in business development activities to address complex policy, safety, and planning questions, and deliver innovative solutions.
- **Projects:**
 - **Benefit-Cost Analysis:** Ohio DOT Cleveland CCG3A Intersection, Missouri DOT STIP 2024-2027 & STIP 2025-2028
 - **Economic Impact Analysis:** Utah's Unified Plan 2023-2050, Utah Transit Authority 2023-2050
 - **Metropolitan Transportation Plans (MTP):** Valdosta-Lowndes MPO 2050 MTP, DARTS 2050 MTP, Bowling Green-Warren County 2050 MTP, Greater Dalton 2050 MTP
 - **Freight Plans:** Stonecrest Freight Cluster Plan, ARTS Regional Freight Plan, TMACOG Freight Profile
 - **Resiliency Plans:** Albany-DARTS Resiliency Plan
 - **National Research:** NCHRP 08-146: Integrating Resiliency into Transportation System Operations

University of Utah

Salt Lake City, UT

Graduate Teaching Assistant - Department of City and Metropolitan Planning

Aug 2021 – May 2023

- Assisted in teaching both undergraduate and graduate courses across five academic terms, supporting course content delivery, managing assignments, and enhancing student learning experiences through regular office hours and personalized guidance.
- Led classroom workshops for 48 graduate students on community and regional analysis, focusing on demographic and economic assessments, while utilizing advanced Excel techniques for data analysis and visualization.

Graduate Research Assistant - Department of City and Metropolitan Planning

May 2022 – Aug 2022

- Conducted comprehensive statistical and empirical analyses using R and SPSS to evaluate resident survey data for the "Thriving in Place" initiative, focusing on housing affordability trends in Salt Lake City to identify factors contributing to resident displacement.
- Developed policy recommendations based on research findings to preserve and increase housing availability, supporting anti-displacement strategies aimed at helping residents thrive amidst urban growth and gentrification, focusing on Wasatch Hollow and Liberty Wells neighborhoods.

Student Researcher - Energy & Geoscience Institute (EGI)

June 2022 – Aug 2022

- Collaborated with geoscience researchers to provide geospatial analysis and visualizations for global and regional mining operations, supporting data-driven decision-making in resource exploration.
- Developed and processed comprehensive geospatial datasets, georeferenced historic mining maps, and integrated geological data for mining regions in Utah and Wyoming.

Prabal Thapa Architects

Kathmandu, Nepal

Architecture Intern & Associate Architect - Full Time

Oct 2016 - Apr 2017, Jun 2020 - Jul 2021

- Developed detailed conceptual design drawings for a variety of architectural projects, including hospitality developments in Ghandruk and Nagarkot, and residential and institutional projects in Surkhet, Chitwan, and Kathmandu.
- Led the development of architectural plans and graphical communications using 2D and 3D visualization, ensuring designs met client expectations and project objectives while fostering strong client relationships through effective communication and tailored solutions.
- Mentored and guided junior staff in advanced design techniques and software applications, enhancing their skills and contributing to overall project success.

Institute of Engineering, Research Training and Consultancy Services Unit

Lalitpur, Nepal

Associate Architect - Freelance

Sep 2020 – Jun 2021

- Led the design team in developing the Masterplan for Padma Kanya Multiple Campus, ensuring alignment with strategic goals and optimizing space utilization to support the institution's growth.
- Produced architectural drawings and digital models, provided planning-level cost estimates, and effectively communicated design concepts and progress to stakeholders, facilitating informed decision-making.

Urban Park Pvt. Ltd.

Lalitpur, Nepal

Junior Architect - Full Time

Jan 2019 – Jun 2020

- Contributed to architectural design and urban planning projects across residential, institutional, and hospitality sectors, including the Film City Masterplan in Dolakha and the ICT Center for Tulsipur's Smart City initiative.
- Led the development of innovative masterplans, ensuring design solutions aligned with strategic objectives and enhancing project outcomes through creative and functional design.
- Developed comprehensive project reports for infrastructure initiatives across Terai and Mid Hill regions, supporting effective urban planning within Nepal's Integrated Urban Development Plan (IUDP) and promoting sustainable growth in newly established municipalities.

Archetype Design Consult Pvt. Ltd.

Kathmandu, Nepal

Architect - Freelance

Jun 2018 – Jan 2020

- Led the conceptualization and execution of major conservation projects, including the Conservation Masterplan for the Sindhuligadhi Area and the Pashupatinath Temple Complex, adhering to international heritage standards.
- Conducted in-depth research, developed detailed inventories of historical assets, and produced comprehensive project reports and digital models, effectively communicating conservation strategies and balancing preservation with sustainable development.

Publications

Zinia, F. A., **Bhandari, P.**, Tuffour, J. P., & Hong, A. (2023). Evaluating Social Equity of Transit Accessibility: A Case of Salt Lake County, U.S. Transportation Research Record, 2677(12), 806-814.
<https://doi.org/10.1177/03611981231170005>

Bhandari, P., "Earthquake Memorial at Barpak, Gorkha", *Spaces Magazine*, March-April 2019, pp. 32-34.
https://issuu.com/spacesnepal5/docs/march_april_2019_f4d9f8b25cec23

Conference Presentations

Duncan C., **Bhandari, P.**, & Cheng S., Resilience Planning: Quantifying the Economic Value of Resilience, Risk Reduction and Asset Protection, Transportation Research Board (TRB) Conference on Innovations in Travel Analysis and Planning, June 2023, Indianapolis - **Poster**

Zinia, F. A. & **Bhandari, P.**, Evaluating Social Equity of Transit Accessibility: A Case of Salt Lake County, Transportation Research Board (TRB) Annual Meeting, January 2023, Washington D.C. - **Lectern**

Bhandari, P., Earthquake Memorial at Barpak, Gorkha, National Architecture Conference "Architectural Responses to Tourism in Nepal", December 2019, Kathmandu, Nepal - **Poster**

Bhandari, P., Earthquake Memorial at Barpak, Gorkha, National Graduate Conference on Architecture (NGC-2019), December 2019, Bhaktapur, Nepal - **Podium Presentation**

Technical Skills

- **Software:** ArcGIS/QGIS, Bentley Cube, TransCAD, Synchro/SimTraffic, AutoCAD, SketchUp, Microsoft Office Suite (*Word, Powerpoint, Excel*), Adobe Creative Cloud Suite (*Photoshop, Illustrator, InDesign*), National Bridge Investment Analysis System (NBIAS)
- **Data Analysis:** Travel Demand Models, Benefit-Cost Analysis of Highway and Bridge Projects, Economic Impact Analysis, Safety Analysis, Accessibility & Equity Analysis, Mobility Analytics (Replica), US Census/LEHD/CTPP, Machine Learning Algorithms (*Naive Bayes, K-Means Clustering, Decision Trees, Random Forrest*)
- **Programming:** R (*dplyr, sf, ggplot2, shiny, quarto*), Python (*numpy, pandas/geopandas, matplotlib, seaborn, scikit-learn*), Database (*MS Access, SQLite, PostgreSQL, DuckDB*), ~~HTML~~ *HTML*, WordPress, Postman API

Volunteering and Participation

Women of the World Kathmandu 2018 Festival | *Site Architect* February 2018

- Led site planning for a major three-day festival, ensuring ADA compliance, emergency management, and efficient space organization to enhance attendee safety and experience.

United Nations Development Program (UNDP) | *Site Architect* May 2018 & September 2017

- Drawing Preparation Initiative for safer reconstruction in *Palungtar Municipality* and *Chautara-Sangachowkgadhi Municipality*, United Nations Development Program funded by the Government of India and The European Union as a part of the Comprehensive Disaster Risk Management Programme (CDRMP).

10th National ASA Architectural Exhibition | *Treasurer* April - July 2016

- Successfully Managed budget for a three-day national architectural exhibition, maintaining fiscal discipline while enhancing event quality and audience engagement.

Aashraya Nepal | *Technical Advisor* May 2015 - July 2015

- Coordinated construction of temporary shelters in *Gorkha, Dhading*, and *Sindhupalchowk* following the 2015 Gorkha Earthquake, delivering rapid infrastructure solutions for affected communities.

Professional Memberships

- **Member**, TRB Subcommittee on Data, Planning, and Analysis Group Young Members, AE000(1)
- **Member**, TRB Subcommittee on Ethics and Equity in AI, AED50(6)
- **Member**, Utah Data Engineers and Scientists in Transportation (UDEST)
- **Student Member**, Association of Pedestrian and Bicycle Professionals (APBP) - Utah Chapter
- **Student Member**, Institute of Transportation Engineers (ITE) - University of Utah Student Chapter
- **General Member**, Point B: Transportation Student Group, University of Utah
- **Registered Architect**, Nepal Engineering Council (NEC), Registration Number: 2245 "Architecture" A

Awards and Recognitions

- **Best Professional Project Award 2023**, University of Utah, Department of City & Metropolitan Planning
- **Best Architectural Thesis Award 2018**, Tribhuvan University, Department of Architecture
- **First Runner-Up**, Asian Paints All Nepal Architecture Student's Design Competition 2017-2018