Durga P Joshi

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PROFESSIONAL SUMMARY

- Skilled in GIS and remote sensing techniques (Image analysis, Cartography, spatial analysis).
- Experienced in conducting forest related laboratory as well as field work.
- Detail oriented, leadership capability, highly organized and able to manage multiple tasks.
- Work well and productive under tight deadline.

EDUCATION

University of Connecticut, Storrs, CT   2021 – Present

Ph.D. Student/Research Assistant, Department of Natural Resource and Environment, *GPA 3.8*

Projects:

- **Monitoring and mapping the tree health using Planetary Image and deep learning.**
- **Vegetation risk modelling for electric utility infrastructure using advanced remote sensing dataset.**
- **Characterization of the roadside vegetation using Dashcam Video.**

Tennessee State University, Nashville, TN   2019 – 2021

MS Student/Research Assistant in Agricultural Science*, GPA 4.0*

Thesis: **Estimation of Above Ground Biomass using LiDAR data and NAIP Imagery in Tennessee.**

Tennessee State University, Nashville, TN   2019 – 2021

Graduate Certificate in Applied GIS, *GPA 4.0*

SKILLS AND KNOWLEDGE

- Excellent written and communication skills.
- Strong knowledge and technical skills in Forestry and GIS.
- Deep learning and Machine learning algorithms.
- Drone Flight and Processing Lidar and other aerial image sensor data.
- Excellent computer knowledge, statistical analytical skills, and use of tools like ArcMap, R, FUSION, ArcGIS Pro, QGIS, ERDAS Imagine, LAStools, SAS, MS suite, python, MATLAB.
- High interest in the application of remote sensing in Natural Resource Management.

EXPERIENCE

Graduate Research Assistant   Jan 2021 – Present

University of Connecticut, Storrs, CT

- Develop skills in Remote sensing data analysis like Image, LiDAR data analysis using various tools and techniques.
- Develop deep learning algorithm and models to analyze the vegetation risk on electric utility
- Design research protocol, data collection, and analysis.
- Assist the ongoing project of the supervisor.
- Prepare scientific reports, present results, and progress reports in international/national meetings and workshops.

Graduate Research /Teaching Assistant   Jan 2019 – Dec 2020

Tennessee State University, Nashville, TN

- Develop skills in Remote sensing data analysis like Image, LiDAR data analysis using various tools and techniques.
- Design research protocol, data collection, and analysis.
- Assist the ongoing project of the supervisor.

- Prepare scientific reports, present results, and progress reports in international/national meetings and workshops.

Research Assistant (GIS Certificate)   Jan 2019- Present
Tennessee State University, Nashville, TN
- Performed GIS Data Management, Analysis, and Documentation.
- Demonstrated Cartographic skills and produced map outputs (slope map, aspect map, land use/ land cover maps, density maps, Choropleth maps).
- Executed Python and R scripts for data automation and used Model builder.
- Expertise: Vector and Raster data display, Digitization, Geoprocessing, Spatial Analysis, Contouring, Data troubleshooting, Time series animations.

Ranger   Oct 2018- Jan 2019
Department of National Park and Wildlife Conservation (DNPWC), Government of Nepal, Kathmandu
- Role as Secretariat for Director General office, DNPWC.
- Supervise and monitor ongoing research activities in the protected areas of Nepal.

Instructor   Nov 2017- Dec 2018
Lord Buddha College, Kathmandu, Nepal
- Prepare and give lectures, discussions, and demonstrations in Forest Mensuration.
- Develop exams to properly gauge information retention and student performance.
- Utilize innovative methods of instruction, including video, interactive class activities and discussions to present course material.

GIS Technician   Mar 2017- Oct 2017
Research and Development Pvt. Ltd., Kathmandu, Nepal
- Evaluate and enhance data collection protocols for GIS related work.
- Conduct training and seminars.
- Demonstrated Cartographic skills and produced map outputs (slope map, aspect map, land use/ land cover maps, density maps, Choropleth maps).
- Provide maps and reports for various project associated works.

PUBLICATIONS

- Thapa, S., **Joshi, D. P.,** Pokharel, B., Lignocellulosic Biomass and Conversion Technology. (In press for Book chapter in the journal Springer Nature).

CONFERENCES AND PRESENTATIONS

- **Joshi D. P**., Wedagedara H., Parent J., Witharana C., Geospatial Modelling of Vegetation Risk on Electric Utility Infrastructure in Connecticut. AGU Fall meeting 2021, New Orleans, Louisiana.

- Wedagedara H., **Joshi D. P.,** C. Witharana, Geospatial analysis of vegetation risk on electricity using lidar data, GIS Day 2021, University of Connecticut, Storrs campus, CT.

- Witharana C., Parent J., Wedagedara H., **Joshi D. P.**, Lidar-Enabled Modelling of Roadside Vegetation Risk to Electric Infrastructure, ASPRS 2021 Annual Conference Program.

- **Joshi D. P.,** Wedagedara H. (2021). Use of multi-source remote sensing data and geospatial modelling to analyze roadside vegetation risk on utility infrastructure, EEC annual workshop, 2021, University of Connecticut, Storrs campus, CT.

- **Joshi, D. P.,** and Pokharel, B., (2019). Modeling and Mapping Woody Biomass Using Airborne LiDAR Data from Tennessee. Society of American Foresters (SAF) Convention, 2019, Louisville, Kentucky.

- **Joshi, D. P.,** and Pokharel, B., (2019). Above ground biomass estimation and mapping using airborne LiDAR. 129th annual meeting of Tennessee Academy of Science (TAS), Columbia, Tennessee.

- **Joshi, D. P.,** Shrestha, T., Gyawali, B., and Pokharel, B., (2019). Modeling aboveground woody biomass and carbon stock using airborne LiDAR. 41st Tennessee state University symposium, Tennessee state University.

HONORS AND AWARDS

- Team-TERRA Research Traineeship ($34,000), National Science Foundation (2022-24)
- Student Conference Presentation Grants, ASPRS 2022
- Eversource Energy Center Graduate **Fellowship**, 2021
- **Honorary mention** in Student Essay writing Contest at NAPA's 2nd Biennial International Scientific Conference 2020.
- **First Place Award** in the ecology and environmental science oral presentation at the Tennessee Academy of Science conference in Nashville, TN, Nov 22, 2019.
- **Research Grant Award** received in a project entitled "**Impact of invasive species on Charcoal production and local livelihood. A case study**" from Bio- energy project, International Union for Conservation of Nature (IUCN)-Nepal, 2017.
- **Scholarship** from Ministry of Federal Affairs and General Administration, Government of Nepal for Undergraduate study in Forestry Science, 2015.

REFERENCES

1) **Chandi Witharana, Ph.D. | Remote Sensing | Assistant Professor in Residence**
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   University of Connecticut, Storrs, CT, 06268
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   Email: chandi.witharana@uconn.edu

2) **Bharat Pokharel, Ph.D., | Associate Professor of Applied Statistics | Graduate Coordinator**
   Modelling and Data Analysis Lab (MADAL),
   Department of Agricultural and Environmental Sciences, College of Agriculture
   Tennessee State University, Nashville, TN 37209
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