

Pradeep Bajracharya

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Research Interest *Bayesian active learning, Uncertainty Quantification, Deep learning and Machine Learning*

Education **PhD in Computing and Information Sciences** **2018 - Present**
Rochester Institute of Technology, Rochester, NY, USA
Advisor: Dr. Linwei Wang
Research Group: CBL Lab
Relevant Courses: Deep Learning, Image Processing and Computer Vision, Probability, Noise System Modeling

Bachelor in Electronics and Communication Engineering, **2011 - 2015**
Pulchowk Campus, Tribhuvan University, Nepal (82.97%) Distinction
Relevant Courses: Probability and Statistics, Numerical Methods, Mathematics I, II, III, IV, Computer Programming I, II, Signal Analysis, Image Processing and Pattern Recognition

Scholarships & Awards **Prof. F.N. Trofimenkoff Academic Achievement Award** **2019**
for graduating top of the class (2015) in BE Electronics and Communications Engineering

RIT Ph.D. Merit Scholarship, Financial assistance for **Aug 18 - Present**
Ph.D. studies at Rochester Institute of Technology

Ncell Scholarship and Excellence Award, of NRs. 100,000 was **2015, 2016**
awarded to top student of BE Electronics and Communications, Electrical and Communication, and Computer

The College Fellowship Scholarship, in various semesters (viz. **2011 - 2015**
Years/Semesters I/I, I/II, II/II, III/I, III/II, IV/I) and **Full-fee scholarship** in semester I/II

Technical Skills **Languages :** Python, C++, C
Tools/Framework : Matlab
Deep Learning Tools : PyTorch, Basic Tensorflow, and Keras
Database : MySQL, MongoDB
Familiar : Symfony, Laravel, PHP, Javascript, HTML, CSS, NodeJS
Miscellaneous : Git, L^AT_EX, Object Oriented Programming

Journal Article **Embedding High-dimensional Bayesian Optimization via Generative Modeling: Parameter Personalization of Cardiac Electrophysiological Models**
Dhamala, J., **Bajracharya, P.**, Arevalo, H. J., Horcek, B. M., Wu, K. C., Trayanova, N. A., Wang, L. *Medical Image Analysis (MedIA)*, 2020

Conference Article **Indoor Odometry and Point Cloud Mapping** Ligal, P. S., Acharya, B., **Bajracharya, P.**, Shrestha, P., Pokharel, P., Ghimire, S. K. Indoor Odometry and Point Cloud Mapping.
Proceedings of IOE Graduate Conference, 2017

Semi-supervised Medical Image Classification with Global Latent Mixing
Gyawali, P. K., Ghimire, S., **Bajracharya, P.**, Li, Z., Wang, L. (2020). Semi-supervised Medical Image Classification with Global Latent Mixing. arXiv preprint arXiv:2005.11217.
Medical Image Computing and Computer Assisted Intervention(MICCAI), 2020

Experience	Research Assistant Computational Biomedicine Lab Rochester Institute of Technology, NY, US Research area: Bayesian active learning and its use for uncertainty quantification in multiscale multi-physics models; Deep learning and Machine Learning	Jun 19 - Present
	Teaching Assistant Imaging Science Department Rochester Institute of Technology, NY, US	Aug 18 - May 19
	Senior Developer Kazi Studios, Bhanimandal, Lalitpur, Nepal Development of Web based solutions, and CRM systems including medical inventory system, and tourism portals. Also worked on smart home system controlled via android, and IOS platform.	Aug 16 - June 18
	Teaching Assistant Department of Electronics and Computer Engineering Pulchowk Campus, Tribhuvan University, Nepal	April 16 - Aug 16
	System Engineer E&T Nepal Pvt. Ltd., Lokanthali, Bhaktapur, Nepal Development of Calculation Solver for CFD simulation with CUDA on NVIDIA GPUs for simulation software "MUJO"	Nov 15 - April 16
	Collaboration Project Internship E&T Nepal Pvt. Ltd., Lokanthali, Bhaktapur, Nepal Took on project named High Speed Data Transfer to make the existing data transfer faster.	May 14 - Dec 14
Projects	Blindness Assistive tracing Band Hardware interface with LiDAR and camera to trace environment for visually impaired person <ul style="list-style-type: none"> • Technology/Tools: C in Arduino • Role: Programmer and Hardware designer and developer (in team of 4) 	Aug 2015
	3D Scanning and Odometry Hardware based project that scans the surrounding using LiDAR (Light Detection and Ranging) and creates 3D map after scanning. Mapping and Visualization is implemented using Point Cloud Library for filtering and segmentation. <ul style="list-style-type: none"> • Technology/Tools: C/C++ in Arduino and Qt Creator with OpenGL • Role: Programmer and Hardware designer developer (in team of 4) 	Nov 2014 - Aug 2015
	High Speed Data Transfer High Speed Data Transfer (HSDT) is a project for increasing the data transfer speed of existing network infrastructure in collaboration with E&T Nepal Pvt. Ltd. It implemented new transport layer protocol named UDT. <ul style="list-style-type: none"> • Technology/Tools: C++ in Visual Studios 2012 • Role: Programmer and Team Lead (in team of 2) 	May - Dec 2014
	Ethernet based Home automation A Web interface, created in HTML, that allows the user to control various household appliances linked via the Ethernet network through any web based consumer electronics. <ul style="list-style-type: none"> • Technology/Tools: C in Atmel Studio, HTML • Role: Programmer and Hardware designer and developer (in team of 4) 	May - Aug 2014

Certification	<ul style="list-style-type: none"> ● Neural Networks and Deep Learning by deeplearning.ai on <i>Coursera</i> Verify : coursera.org/verify/3MPX68UEQPTL ● Bayesian Methods for Machine Learning by National Research University Higher School of Economics on <i>Coursera</i> <i>Ongoing</i>
Professional Service	<ul style="list-style-type: none"> ● Head Designer for "Locus Journal" magazine (a tech magazine focusing on the latest in technology and research paper from students) for LOCUS - Technological Festival, Pulchowk Campus, Tribhuvan University, Nepal (2015) ● Co-editor Magazine for Rotaract Club of Lalitpur, Nepal covering different events organized throughout the year (2014/2015) ● Stage Management Coordinator Candle Walk 1135, an annual event organized every year by the Rotaract Club of Lalitpur, Nepal on the festival of Tihar (Oct 2014) ● Head Designer for the first issue of "Graphene" magazine, a tech magazine focusing on the latest in technology (2012)
Additional Activities	<ul style="list-style-type: none"> ● Technician Level Amateur License Holder in Nepal (2016 - Present) ● Technician Level Amateur License Holder in USA (2019 - Present) ● Volunteering experience at LOCUS - Technological Festival, Pulchowk Campus, Tribhuvan University, Nepal.