PRADEEP BAJRACHARYA

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RESEARCH INTERESTS

Bayesian active learning and its use for uncertainty quantification in multiscale multiphysics models, Deep learning and Machine Learning

ACADEMIC QUALIFICATION

2018 – Present	**PhD in Computing and Information Sciences** Golisano College of Computing and Information Sciences Rochester Institute of Technology, 1 Lomb Memorial Dr, Rochester, NY 14623 **Advisor:** Dr. Linwei Wang **Relevant Courses:** Deep Learning, Image Processing and Computer Vision, Probability, Noise & System Modeling
2011 – 2015	**Bachelor in Electronics and Communication Engineering,** Pulchowk Campus, Institute of Engineering, Tribhuvan University, Lalitpur, Nepal. Graduated in December, 2015 (with 82.97%) **Relevant Courses:** Probability and Statistics, Mathematics I, II, III, IV, Numerical Methods, Computer Programming I, II, Signal Analysis, Image Processing and Pattern Recognition

AWARDS

2018 – Present	**RIT Ph.D. Merit Scholarship** Financial assistance for Ph.D. studies at Rochester Institute of Technology since August 2018
2016	**Prof. F.N. Trofimenkoff Academic Achievement Award** for graduating top of the class (2015) in BE Electronics and Communications Engineering
March 2015, 2016	**Ncell Scholarship and Excellence Award** of NRs. 100,000 was awarded to top student of BE Electronics and Communications, Electrical and Communication, and Computer
2011 – 2015	"**The College Fellowship Scholarship**" in various semesters (viz. Years/Semesters I/I, I/II, II/II, III/I, III/II, IV/I) and "**Free ship**" in semester I/II

TECHNICAL SKILL

Languages/Programming	Python, MATLAB, C++, C
Deep learning Tools	Pytorch, Basic Tensorflow and Keras
Database	MySQL, MongoDB
Web Development	Symfony, Laravel, HTML/5, Javascript, CSS, NodeJS
Miscellaneous	LaTeX, Git
Operating System	Linux and Windows

PUBLICATIONS

Ligal, P. S., Acharya, B., Bajracharya, P., Shrestha, P., Pokharel, P., & Ghimire, S. K. Indoor Odometry and Point Cloud Mapping.

WORK EXPERIENCE

Aug 2016 – June 2018. **Senior Developer, Kazi Studios, Bhanimandal, Lalitpur**
Development of Web based solutions, and CRM systems including but not limited to medical inventory system, tourism portals and android applications. Also worked on smart home system controlled via android, and IOS platform and chatbot integrated in messenger.

Apr 2016 – Aug 2016 **Teaching assistant/internship, Pulchowk Campus, Lalitpur**
Conducted Basic Electronics Lab sessions for first year students for a semester

Nov 2015 – Apr 2016 **System Engineer, E&T Nepal Pvt. Ltd., Lokanthali, Bhaktapur**
Development of Calculation Solver for CFD simulation with CUDA on NVIDIA GPUs for simulation software "MUJO".

May 2014 – Dec 2014 **Collaboration Project with E & T Nepal Pvt. Ltd.**
Took on project named High Speed Data Transfer to make the existing data transfer faster.

PROJECT PORTFOLIO

Undergrad Thesis Project **3D Scanning and Odometry (Nov 2014 – Aug 2015)**
Language: C/C++ in Arduino and Qt Creator with OpenGL
Role Played: Programmer and Hardware designer & developer (in team of 4)
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.

Undergrad Project **Ethernet based Home automation (May 2014 - Aug 2014)**
Language: C in Atmel Studio, HTML
Role Played: Programmer and Hardware designer and developer (in team of 4) 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.

Collaboration Project. **High Speed Data Transfer (May 2014 – Dec 2014)**
Language: C++ in Visual Studios 2012
Role Played: Programmer and Team Lead (in team of 2)
High Speed Data Transfer (HSDT) is a project for increasing the data transfer speed of existing network infrastructure. It implemented new

transport layer protocol named UDT with nearly 2% increase in data speed via LAN.

Independent Projects	**Blindness Assistive tracing Band (Aug 2015) -** hardware interface with LiDAR and camera to trace environment for visually impaired person (C in Arduino)

atAche (July 2015) – Check heartbeat pattern and alert on irregular heartbeat detection (Android)

Job Search (Oct 2014) – App to recommend jobs to user based on resume (Android)

VHDL based 4bit CPU (Aug 2014) – A 4 bit model of CPU for various Arithemetic and Logarithmic operations (VHDL in Xilinx)

Bullet Effect (Dec 2013 - Mar 2014) - Modelled and simulated motion of a slow moving bullet in three dimension viewport with transformations and lighting algorithms. (Python)

Dot and Boxes (Dec 2012 - Mar 2013) - 2D game where the user gets turn to draw lines between two dots with goal to make multiple boxes. Only two player mode is supported by the game with features of score management. (C++, OpenGL)

Digital Logic Gates: (Jan 2012 - Mar 2012) - Console based interface to provide general information related to basic logic gates (C)

Digital Clock (Mar 2013) - Hardware project to create a digital watch using 7 segment displays which could be configured to user defined time.

ACTIVITIES/LEADERSHIP

2016 - Present	**Amateur Ham Radio Operator** Technician Licensed Amateur Ham Radio Operator and member of IOE Amateur radio club
2015	**Head Designer** Head Designer of the of "Locus Journal" magazine, a tech magazine focusing on the latest in technology and research paper from students.
2014/15	**Co-editor** Co-editor of Magazine for Rotaract Club of Lalitpur covering different events organized throughout the year
Oct 2014	**Stage Management Coordinator**

Acted as Stage Management Coordinator for the Candle Walk 1135, an annual event organized every year by the Rotaract Club of Lalitpur on the day of Laxmi Puja.

2012   **Head Designer**
Head Designer of the first issue of "Graphene" magazine, a tech magazine focusing on the latest in technology