Rajesh Shrestha

📱 +1 (541) 777 9024   ✉ rajesh.45npt@gmail.com   in linkedin.com/rajesh-shrestha-434999152/
🌐 https://rajeshshrestha.github.io   ⊙ github.com/rajeshshrestha

RESEARCH INTEREST

Interested in unsupervised learning including generative models, representation learning and domain adaptation.

EDUCATION

Oregon State University — GPA: 4.0   **Corvallis, Oregon, USA**
Ph.D. Major in Computer Science and Minor in Artificial Intelligence   *Sept 2021 - Current*

Pulchowk Campus,IOE — Percentage: 81.71%   **Pulchowk, Lalitpur, Nepal**
Bachelor's Degree in Electronics and Communication Engineering.   *Nov 2014 - Sept 2018*

WORK EXPERIENCE

Graduate Research Assistant   **Advised: Prof. Xiao Fu, Funded: MLWiNS (NSF/Intel)**
Oregon State University   *April 2023 - Current*

- Proposed a new ADMM based channel estimation method outperforming the existing methods and provided its theoretical recovery analysis
- Leverage deep learning like generative models to enhance performance and speed up the runtime.

Graduate Teaching Assistant   **CS340- Introduction to Database**
Oregon State University   *Sept 2021 - Mar 2023*

- Collaborated closely with professor to design the assignments and develop the autograder.
- Assisted the student learning through office hours and ed discussion. Collaborate with other TAs for grading and providing feedbacks

Machine Learning Engineer   **Level 3, Level 2 and Associate**
Fusemachines Inc., Kathmandu, Nepal   *Oct 2018 - Aug 2021*

- **Recommendation systems for Push Notification Advertisement**: Collaborated with data engineers and client's team to design data pipeline and scalable recommendation model along with deployment to serve millions of push notifications per day. Techniques involved: Deep Factorization machines and Reinforcement Learning techniques.
- **Field value extraction for semi-structured documents**: Worked in a team to create a product that extracts values of specified fields from scanned file of similar documents. Techniques involved: Registrations, clustering, text recognition using CRNN etc.
- **Speech Recognition System for the Nepali language**: Worked in a team to create a product for the speech recognition of Nepali language. Techniques Involved: RNN, CTC, EESEN etc.
- **Managerial and other roles**
  * Supervised two machine learning engineers and guide in their project
  * Assisted HR in hiring of new machine learning engineers
  * Created teaching contents, assignments and projects for fuse.ai and fellowship program

PROJECTS

- **Conditional Image Generation with Pretrained Generative Model:** Proposed set of methods based on empirical analysis for the reduction of computation time in conditional image generation using pretrained models. pdf
- **Natural Gradient Method: Perspective, Efficient-Scalable Approximation and Analysis:** Theoretical Analysis, study of current approximation and analysis of its performance with experiments pdf, github
- **Camera Model Identification to authenticate digital images,** Use of image processing and modern deep learning with ensembling techniques for source camera identification of digital images pdf

PUBLICATIONS

- **Exploratory Training: When the Trainers Learn**. The Proceedings of SIGMOD Workshop on Human-In-the-Loop Data Analytics (HILDA)   Link
- **Exploratory Training: When Annotators Learn About Data.** International Conference on Management of DATA (SIGMOD'23)   Link

HONOR AND AWARDS

Excellent Project Execution -Fusemachines Inc   **AI Fellowship-** Fusemachines Inc
Fellowship for Bachelors - Insitute of Engineering   **Best Engineering Award, Panasonic Award-** ABU