Gyanendra Shrestha

(850) 405-8367 || shrestha.gyanendra020@gmail.com || linkedin

Ph.D. Student in Computer Science with a focus on web-scale data science, analytics, machine learning, and software engineering.

EDUCATION

Ph.D. Computer Science - Florida State University, Tallahassee, FL, USA (GPA: 3.975/4) Jan. 2021 - Present

WORK EXPERIENCE

Graduate Assistant - Florida State University, Tallahassee, FL , USA May 2021- Present

Graduate Teaching Assistant for courses including Unix Tools (COP4342), Operating Systems (COP4610), Data Structures, and Algorithms (COP4530), Introduction to Data Science (CAP5768), and Advanced Data Science (CAP5769).

Graduate Research Assistant working on developing deep learning embedding models for tabular data understanding to aid table search and data fusion. Published research in the EDBT conference.

- Big Lab: Developed transformer-based model aligned with **BERT** configurations to create structurally aware composite embeddings for tables with complex structured data, outperforming state-of-the-art models by up to 28% [1]. Fine-tuned **Large Language Models** like **GPT2**, **Llama2**, and several transformer-based deep learning models, as well as classic Word2vec NLP embedding model on large-scale structured datasets [1, 2].
- Bioinformatics Lab: Worked on Complex Structural Variant (SV) detection using long read DNA sequencing data. Utilized the union-find algorithm for clustering potential SVs from aligned long reads.

Software Engineer - Tekvortex Pvt. Ltd. Pulchowk, Lalitpur, Nepal June 2020 - Dec.2020

- Enhanced existing software that assists clients in determining whether to migrate from on-premises servers to AWS Cloud by providing cluster suggestions and cost estimates. Improved cost accuracy by 5% by adding disk usage calculations. Fixed multiple production issues/bugs, reducing customer support tickets by 30% through collaborating with the Support Team.

Software Engineer - E&T Nepal Pvt. Ltd, Lokanthali, Bhaktapur, Nepal Jan. 2018 - Feb. 2020

- Developed automated 3D model recognition software for a major manufacturing part supplier in Japan, utilizing standard C++ library functions to reduce processing time by 10% and minimize memory consumption by 15%.
- Relocated on-site to Japan (Core Concept Technologies Inc.) for three months to work closely with clients, accelerating project completion by 10% through direct collaboration and iterative feedback.

Assistant Lecture - Tribhuvan University, IOE, Thapathali Campus, Nepal Jan. 2017 - Dec. 2017

- Collaborated with Professor to prepare lecture notes, grade coursework and held lab sessions for courses including Image Processing and Pattern Recognition (CT72504), and Data Mining (CT72502).

SKILLS

- Programming languages: Python, C/C++, JavaScript, SQL
- Big Data & Machine Learning: Spark, MongoDB, Python (e.g. scikit-learn, numpy, pandas, matplotlib), PyTorch, TensorFlow

PROJECTS

- **CancerKG (Big Lab, FSU)** - Web-scale, trustworthy Knowledge Graph on Cancer learned from millions of Web sources. The project is currently in progress.
- **Cloudchomp (Tekvortex Pvt. Ltd)** - An analytics tool to assist organizations in making data-driven decisions regarding the migration of resources from local private servers to AWS cloud. Enhanced the existing module by adding features such as disk, and memory usages analysis to help clients decide on migrating from on-premises servers to AWS Cloud.
- **Feature recognition of CAD data (E&T Nepal Pvt. Ltd)** - Automated 3D model recognition software for leading manufacturing industry in Japan. Collaborated with an expert team of Japan and Nepal to design software based on C++ using ACIS and spatial libraries from Spatial. The software's objectives included recognizing geometrical shapes, identifying parts in CAD data of pins, measuring their attributes (e.g., dimensions), and extracting text information using OCR (Tesseract, Leptonica).
- **Real Time Person Identification and Location Detection using Face Recognition** - Undergraduate Major Project using Open CV library for image processing. Collaborated with team members to collect sample images used in training the Haar Cascade Classifier for face detection and implemented PCA-LDA algorithm for face recognition.

HONORS AND AWARDS

- Full Academic Scholarship for B.E. Jan. 2013
- Recipient of "Advanced International H.S. Merit Scholarship", full tuition waiver June 2010

MEMBERSHIP

Core Member at Robotics and Automation Center, Tribhuvan University IOE, Thapathali Campus. Nov. 2013 - Nov. 2016

- Participated "**International Robotic Challenge**", **Techfest 2015-2016,** IIT Bombay, India.
- Second Position in **"Minefield"** event, KSHITIJ 2015, IIT Kharagpur, India.

SELECTED PUBLICATIONS

[1] **Gyanendra Shrestha**, Chutain Jiang, Sai Akula, Vivek Yannam, Anna Pyayt, Michael Gubanov. Tabular Embeddings for Tables with Bi-Dimensional Hierarchical Metadata and Nesting, to appear in EDBT, 2025.

[2] Bhimesh Kandibedala, **Gyanendra Shrestha**, Anna Pyayt, Michael Gubanov. Scalable Tabular Hierarchical Metadata Classification in Heterogeneous Structured Large-scale Datasets using Contrastive Learning. In AAAI 2025. (under review)