Prajwol Lamichhane

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Education

University of North Florida   *Florida, USA*
MSc in Data Science   *Aug 2022 - Current*
- **Courses:** Programming for Data Science, Knowledge Representation and Reasoning, Learning Skills through Case Studies, Artificial Intelligence, Information Retrieval and Text Mining(Ongoing)

Kathmandu University   *Kavre, Nepal*
Bachelors in Computer Engineering   *Aug 2016 - Oct 2020*
- **Courses:** Probabilities and Statistics, Programming Languages, Data Structures and Algorithms, Machine Learning, Economics

Skills

Programming	Python (Pandas, Tensorflow, NumPy, Scikit-learn, NLTK, Spacy etc.), SQL.
Miscellaneous	Elastic Search, Haystack, AWS[S3, EC2, EMR, Lambda], Databases[Redshift, Timescale, MySQL], Linux, Shell (Bash/Zsh), LaTeX(Overleaf/R Markdown), Minitab, SEO, Pitchbox, Firebase, Git.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation.

Work Experience

University of North Florida   *Jacksonville, Florida*
Graduate Research Assistant   *August 2022 - Current*
- Utilized PubMed biomedical literature to build a contradiction detection corpus using tool called SemRep
- Querying and processing results from SQL server to build a corpus
- Building a robust contradiction detection model using the corpus.

Fusemachines Nepal   *Baneshwor, Nepal*
Machine Learning Engineer   *July 2020 - July 2022*
- Managed an AWS ETL Pipeline consisting of more than 2 billion records every day. The pipeline was composed of EMR, EC2, S3, Redshift, Timescale, and MongoDB. Pyspark was the environment was used on ETL.
- Worked on Clicked and Conversion-based CTR models.
- Indexed 80 Terabytes of Elasticsearch Data on AWS and Visualized using Kibana Dashboard
- Applied Elasticsearch and Haystack to approach the Question Answering Problem
- Used different Experiment tracking tools like Wandb, MLflow to track experiments in real-time
- Developed automated monitoring systems to track failures using Graphana and Netdata.
- Deployed CI/CD applications using Jenkins, Docker
- As a team leader, I led a team of 3 interns and worked on Team Standardization, published various interactive Machine Learning and Deep Learning Contents that include Chapter Descriptions, Assignments, and Quizzes related to various algorithms in Classical Machine Learning and Neural Networks

Infosys Instep   *Banglore, India*
Machine Learning Intern   *July 2020 - Oct 2020*
- Worked as a Machine Learning Developer on Nia DocAI. Nia DocAI is an Optical Character Recognition Project where information from scanned documents was extracted using a tesseract model. The model was deployed using a Django Application on Heroku.
- Developed Web Application to enriched text contents from document images

Help Nepal Network (HeNN)   *Kathmandu, Nepal*
Linux Professional   *2016 - 2020*
- Cloning and Deploying the Linux Servers and their regular maintenance
- Monitored various servers in different locations in the Country
- Conducted training to educate the school teachers on how Linux servers are handled and operated

Honors & Awards

University of North Florida, USA	3rd Prize in AI For Good Hackathon sponsored by Microsoft, FIS, and JEA held in [Sep 23 – 25, 2022]
Kathford College, Nepal	Winner of Code For Cause 2020 Hackathons held in [March 22 - 26, 2020]
Prixa Technologies, Nepal	Prixa Excellence Award for the best Project from Department for the Year 2018

Certifications

Google Tensorflow	Tensorflow Developer Certification
CompTIA	CompTIA Linux+ Certification
Hackerrank	Python Developer Certification
Coursera	How to Win a Data Science Competition: Learn from Top Kagglers
Coursera	Neural Networks, Computer Vision and Natural Language Processing

Projects

Route Optimization for School Bus
Dec 2022 - Feb 2023

ReadUSA Inc.

- Developed school bus route optimization application for ReadUSA, a charitable organization
- Utilized OpenRouteService API and the traveling salesman problem
- Improved efficiency and sustainability of transportation for ReadUSA's educational program
- Demonstrated technical proficiency in API usage and application development

Future Sales Prediction
Freelance

BISCO Industries

- Introduced pre-processing steps like BoxCox, Tokenization, Concatenation on text/numerical data
- Developed a concatenated model(LSTM + ANN) to extract features from string using LSTM and ANN
- Predicted profitable future price of a product on the basis of its brand name, model number, and ordered quantity
- Manually tweaked the loss function so that the model outputs a price that was always higher than the company bought the goods in which way the company always generated a profit margin as a mediator

Online Meetings Analyzer and Summarizer

Infosys Hackathon

- Developed a python application during lockdowns that can analyze virtual meetings and make key notes
- Various tasks done involve Meeting Summarization and Emailing to the participants, Topics and Conclusion extraction, Meeting Polarity Generation to measure the meeting productivity
- Deployed a full-phase docker application using Django on Heroku

News Recommendation System

Kathmandu University

- Developed a Django platform that recommends news using content filtering method on the basis of views and clicks behavior of users using cookies.
- Manually implemented transitional probabilities (Markovian Chain) to recommend the News articles
- Developed an extension that could check whether the News is Fake or Real and by what confidence

The Sign Language Platform

Kathmandu University

- Worked on a platform for the aphasic person who can communicate using American Hand Signs.
- Developed a CNN model that can understand American Hand Signs and convert them into speech

Other Projects

- Recommendation System using Elastic Search
- Questions Difficulty Ranking
- Virtual Meeting Automation
- GAN on National Flags
- Osho's Voice Generation using LSTM Attention
- Parallel String Searching C script like Grep
- Facebook Chat Assistance
- Sentiment Analysis Application
- Image Captioning using CNN, LSTM
- Slowloris Port Scanner for DDoS Attacking

References

Dr. Indika Kahanda
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Asst. Professor

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Assoc. Professor

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