Rajan Ghimire

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1751 Sheppard Avenue East, North York

PROFESSIONAL EXPERIENCE

Court Monitor Jan 2024 – present | Oakville,Toronto

Aerosports Trampoline Park

- Supervise over 20 children enforcing guidelines and creating a fun atmosphere.
- Actively engaged with customers and converted four clients to annual package subscriptions.
- Quickly responded to and efficiently resolved 5+ minor incidents each week, ensuring timely care and maintaining a safe play environment.

Programming Instructor Feb 2023 – Sep 2023

IIMs college Kathmandu, Nepal

- Taught Python and C++ programming to bachelor's students for two semesters.
- Delivered three machine-learning workshops to a group of 45 students.
- Delivered two 5 Natural Language Processing workshops for all-year MCS students.

Digital Sales and Data Analyst Apr 2023 – Nov 2023 | US (Remote)

Trifecta Digi Media

- Conducted data analysis, churn rate, and market basket analysis of a supermarket with 100+ branches.
- Boosted alcohol sales of the supermarket by 8.81% through data analysis of purchasing patterns and strategic promotion development over six months.

Machine Learning Engineer II Dec 2021 – Nov 2023

E.K. Solutions Pvt. Ltd., Lalitpur Kupondole, Nepal

- Built two Computer Vision projects on Medical image processing with a recall of over 90%.
- Led the development of $300,000 worth of natural language processing (NLP) projects including Resume parser, Text-to-SQL, and Text-to-Visualization.
- Opensourced 10+ machine learning projects and more than 20+ research paper implementations.
- Collaborated with the hiring team by interviewing 52 candidates and supervised a team of seven interns for six months.

EDUCATION

Lambton College 2022 – 2024 | North York, Canada

Artificial Intelligence & Machine Learning

Kantipur Engineering College 2017 – 2022 | Lalitpur, Nepal

Bachelors in Computer Engineering

Educational Achievements

- Winner of LITEHACK hackathon 2020 for Hands-free operation of the computer.
- Winner of LITE Technical Exhibition 2019 for 3D Battle tank game on Unreal engine.
- Winner of LITE IDEATHON 2020 on the topic of Eye Problem Detectors using Artificial Intelligence.
- Published 2 research papers in Computer Vision and Natural Language processing with over 17 citations.

SKILLS

- **Game Development** (Pygame(Expert), Unity(Experienced) , Scratch(Experienced)
- **Programming Languages:** (Python (Expert), C++(Experienced), C(Experienced))
  - Over **4** years of experience in Python with over **13** projects, over **2** years of experience in C++ with **4** projects, and over **1** year experience in C# with Unity.
- **Machine Learning Tools** (Pytorch, PyTorch Lightning, Tensorflow, Keras, Scikit-learn, Pandas)
  - Over 3 years of experience with Pytorch and Tensorflow spanning Model Quantization, Model Deployment, Object Detection (YOLO, DETR, yolov5_obb), LLMs (LLaMa2, LLaMA, StarCoder, GPT-2, BERT), Generative Models (CLIP, VQ-GAN, WGAN, SRGAN, VQ-VAE), Segmentation (SAM, U-Net, Depplabv3+)
  - Deployed over 10 vision and language models using REST-API on Flask and Fast-API.
- **Mathematics**: (Linear Algebra, Probability, Statistics, Calculus)

PUBLICATIONS

Ghimire R, Basnet R, Shahi R, Joshi S., Leveraging Transliteration, Spelling Detection and Correction, Parts of Speech Tagging and Next Word Prediction for Effective Nepali Typing
KEC Conference Proceedings, 2022, Vol. 4, pp 55-62 , ISSN 2961 - 1695(Print), ISSN 2961 - 1997(Online)

It introduces a unique application focused on improving typing efficiency in the Nepali language. Recognized the significant digital transformation in various sectors emphasizing the need for a hassle-free typing tool in native languages. Next Word Prediction and Parts of Speech Tagging functions were done using a BERT model trained on a Nepali dataset.

Ghimire R, Basnet R, Maharjan R., Eye Controlled Virtual Keyboard Using Convolutional Neural Networks
KEC Conference Proceedings, 2021, Vol. 3, pp 237-242, ISBN 978-9937-0-9019-3

It presents a critical advancement in digital communication, tailored explicitly for differently-abled individuals. Libraries like Dlib and openCV were used followed by Convolutional Neural Networks to monitor and interpret eye movements and blinks to select keys on the keyboard effectively. Facilitates differently-abled individuals with a highly efficient, inclusive communication tool.

AVAILABILITY

Saturday, Sunday, Tuesday, Thursday: **Full-time** Wednesday, Friday: **7 A.M - 3 P.M**