Pranjal Dhakal

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Education

Pulchowk Engineering Campus, Tribhuvan University — Kathmandu, Nepal
Bachelors in Electronics and Communication Engineering, 82.03% ***Distinction*** — *Nov 2013 – Sep 2017*

Trinity International College — Kathmandu, Nepal
Higher Secondary, Physics and Mathematics Major, 87.5% ***Distinction*** — *2011 – 2013*

Publications

One-Shot Template Matching for Automatic Document Data Capture — Nov 2019

- IEEE, 2019 Artificial Intelligence for Transforming Business and Society (AITB)
- Development of One-Shot learning model for learning to make predictions to extract data from a single training document.

Projects

Graph Neural Networks Tutorial
Python, Pytorch, Jupyter, Git — Nov 2020

- Developed a tutorial to explain the architecture of the following papers:
  - Semi-Supervised Classification with Graph Convolutional Networks
  - Inductive Representation Learning on Large Graphs
- Trained a simple GNN network using Graph Pooling to predict whether a purchase event will occur in a web-session where the user has interacted with multiple items.

Major Project on Image Enhancement and Object Recognition for Night Vision Surveillance
Python, Tensorflow, C — Aug 2017

- Implementation of standard and adaptive histogram equalization, and Retinex algorithms for image enhancement using Python OpenCV library.
- Implementation of CNN architecture for image classification using Tensorflow library.
- AVR programming and PCB designing.

HSN Code Classification
Python, Scikit, Matplotlib — Aug 2018

- TF-IDF and Count Vector feature Extraction.
- Naive-Bayes Multinomial and Logistic Regression Classifier.
- Comparative analysis of classification performance of different models and features.

Work Experience

Data Scientist — Aug 2018 – July 2021
Docsumo — *Kathmandu, Nepal*

- Developed Computer Vision and Natural Language Processing models for automating key-values extraction from unstructured documents like scanned images and PDFs.
- Developed Image Processing and Natural Language Processing models to detect and parse table data from scanned images.
- Helped design assistive and human-in-loop architectures to improve data extraction efficiency from unstructured documents.
- Developed REST APIs for a variety of machine learning models using Flask and Dockers and deployed these APIs using Google Cloud Run and AWS lambda platform.
- Designed and maintained PostgreSQL database to store user's web behavior data.
- Performed user web behavior analysis to determine trends and anomalies, to inform website element changes and to suggest better marketing campaigns.

Associate Software Developer — Oct 2017 – Apr 2018
LIS Nepal — *Kathmandu, Nepal*

- Developed scripts for automating the data warehousing (Extract, Transform and Load) for Nepal Telecom Company using PLSQL.
- Retail Analytics and Retail Sales Audit technical support service for Retail industry clients like Alex and Ani USA, Hot topic USA and SSC Pakistan.
- Developed a web-based project management tool "Attrition Rate Generator" using PHP, HTML and CSS.

Scholarships and Awards

National level scholarships for excellent academic performance in undergraduate studies. Awards in recognition for graduating with highest marks in the Electronics and Computer department in 2017.

Scholarships

- Merit based Full tuition wavier, Tribhuvan University. (Nov 2013 - Sep 2017)
- Merit based Full tuition wavier, Trinity International College. (2011 - 2013)

Awards

- Prof F.N. Trofinmenkoff Academic Achievement Award
- Ncell Scholarship Award, 2015
- Ncell Excellence Award, 2018

Technical Skills

Languages: Python, C/C++, Bash
Database: MySQL, OracleSQL, POSTGRESQL, Google Big Query
Developer Tools: Git, Jupyter, Google Cloud Platform, VS Code, Visual Studio
Libraries: Pandas, NumPy, Pytorch, Keras, OpenCV, Spacy, SparkNLP, Scikit, Seaborn, Matplotlib
Others: Flask, Dockers, Regex

Certifications

Convolutional Neural Network, Coursera
https://www.coursera.org/account/accomplishments/certificate/U5WTH4RYW2AA

Neural Networks and Deep Learning, Coursera
https://www.coursera.org/account/accomplishments/certificate/8ZSRWGMFZE2D

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, Coursera
https://www.coursera.org/account/accomplishments/certificate/UQWFKGXG2KQC

Algorithmic Toolbox, Coursera
https://www.coursera.org/account/accomplishments/certificate/9EQK5YSLH5ZJ

Standardized Test Scores

GRE (Jan 2018): 170Q, 157V, 4AWA

TOEFL (May 2018): 30L, 30R, 30W, 28S