Aaditya Chapagain

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- 4+ years of general programming background. Experienced in web development and embedded systems development projects
- Experience on different projects that emphasis on the Artificial Intelligence and Data Analysis
- Highly interested in algorithms and use of mathematical modeling and statistical approach in development.
- Sufficient knowledge in different programming languages including C, C++, Java and very Good knowledge and understanding of Python, JavaScript, Typescript and developed numerous projects based on those language
- Result Oriented, Hardworking, friendly, self driven and eager to learn new technology, methodology, process and strategies

Experience

Robotics And Automation Center - Thapathali Campus

Member

- Design algorithms for various automatic problem solving strategies in limited memory systems
- Code for automatic and manual robots for various national and international competitions.
- Perform and / or monitor overall activities involved in designing, fabricating, modifying, or testing of robots and related systems

Leapfrog Technology

2019 JANUARY TO 2019 FEBRUARY 26

Machine Learning Intern

- Learned to build Industry Scale Machine Learning Pipeline.
- Learned Maths behind a variety of traditional Machine learning approaches and techniques.
- Hands-on training on Exploratory Data Analysis and Data Science.

Fusemachines Nepal

2019 - MARCH

Machine Learning Engineer

- Using Machine learning and Statistical modeling techniques to develop and evaluate algorithms to improve performance, quality and accuracy.
- Integrating machine learning framework with highly scalable, distributed cloud services.
- Stay informed with latest machine learning tips and techniques.
- Contributes to design and prototyping of medium to high complexity Machine learning system.

Projects

Ingredient Recommendation and Recipe Generation

APRIL 2019-FEB 2020

- Ingredient replacement recommendation for foods non - vegetarians foods with veg ingredient which have similar tastes and nutritional information.
- New recipe Generation from existing recipe datasets and given available ingredients.

Projects in Django

https://github.com/aadityachapagain/django_comms

- Creating a Forum discussion page using python, Django.
- Used Mysql database tables to store users' information.
- Created login pages and UI using React, w3css.

Dota 2 Game Predict

https://github.com/aadityachapagain/DotaCalc

- Dota2 Developer competition.
- Building a model to predict the team which will win the game.
- Extracting data from Dota API platform.
- Datasets contain game stats of both teams per minute.

OpenCV_Py

https://github.com/aadityachapagain/OpenCVpy

- learned the Underlying implementation of renowned Python library openCV2.
- Implemented Gaussian Blur, SIFT (Extraction and transformation), edge detection, Affine Transformation in python from scratch.

Visualizing CNN filters.

https://github.com/aadityachapagain/Visualizing_CNN_filters-and-Saliency_maps

- Code to visualize the filters of the deep CNNs filters.
- Used Gradient Ascent to created maximum activation image for earch layer to see what each filter learns in deep CNNs architecture.

Face and Facial Expression Detection

https://github.com/aadityachapagain/Facial_Recognition_System

- Used MTCNN to detect face and facial landmarks.
- Used only the Convolutional Layer of Resnet50 to create a Siamese network for recognition of a face.

Food Calorie Estimation using DL

- Used MaskRCNN(DarkNet) to predict foods and its boundary.
- Created datasets of own and labeled a few images to train.

Automatic Speech recognition system

Building ASR for Nepali language. Did research on Classical approach to modern end

to end approach for speech Recognition. This is on going project.

Ranking users Leadership using NLP

Build Transformer model for ranking of user leadership ability given user essay and CV.

Skills

- Excellence in C, C++, JavaScript, Python, HTML, MongoDB, MySQL .
- Expertise in numerous hardware electronics components.
- Familiarity with MEAN Stack, React , React- native.
- Good knowledge and hands on coding experience with numpy, scipy, sikitlearn , keras and tensorflow.
- Good Understanding of React, Redux
- Fluency in English, Nepali and Hindi.
- Ability to speak in a mass with confidence

Education

Institute of Engineering, Thapathali Campus, Kathmandu

2014 TO 2018

Bachelor of Engineering in Electronics and Communication(72% tentative)

B.E. in Electronics and Communication Engineering from Tribhuwan University,Institute of Engineering,Thapathali Campus, waiting for final semester result.

Sainik Awasiya Mahavidyalaya (SAMB) , Sallaghari, Bhaktapur

2014

Intermediate Level(10+2) in Science Stream

Aggregrate of 74.2%, HSEB Board.

Lumbini School , Kawasoti, Nawalparasi

2012

Trainings

Workshop on Physics Simulation with python

IOE,Thapathali Campus

With the help of book Simulation with python

Workshop on Data Analysis

IT training Nepal

2 days Free Workshop organized by IT training Nepal on Data Analysis Using Numpy, pandas

Sequence Models

AUG 2019

Coursera

- Understand how to build and train Recurrent Neural Networks (RNNs), and commonly-used variants such as GRUs and LSTMs.
- Applied training on sequence models to natural language problems, including text synthesis.
- Applied training on sequence models to audio applications, including speech recognition and music synthesis.

Workshop in Data Science

Leapfrog Academy

Free workshop in Data Science organized by Leapfrog Academy using Sikit-learn , Numpy, Matplotlib, pandas in python

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

JUN 2019

Coursera

- Understand industry best-practices for building deep learning applications.
- Able to effectively use the common neural network "tricks", including initialization, L2 and dropout regularization, Batch normalization, gradient checking
- Able to implement and apply a variety of optimization algorithms, such as mini-batch gradient descent, Momentum, RMSprop and Adam, and check for their convergence.

Computer Vision

JUL 2019

Coursera

- Learned to implement the foundational layers of CNNs (pooling, convolutions) and to stack them properly in a deep network.
- Learned practical tricks and methods used in deep CNNs.
- Learned how to implement and train CNNs for object Detection and Localization purpose.

Recommendation System

https://www.oreilly.com/

Hands-on training on various recommendation system algorithms i.e Collaborative filtering , content based filtering, knowledge based system, Clustering algorithms using sophisticated tools like scikitlearn, DeepCTR .

References

Punit Man Shrestha

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