

# KAMAL SHRESTHA

M. Tech(CSE), Indian Institute of Technology, Hyderabad (IITH)

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📍 Kathmandu, Nepal, 44600

## EDUCATION

Indian Institute of Technology(IIT),Hyderabad<sup>Fall 2021</sup>

M. Tech in Computer Science and Engineering (CSE)

📅 Aug 2021 – 2023

📍 Telangana, Hyderabad, India

Kathmandu University (KU)

B. E. Computer Engineering (CGPA 3.78/4)

📅 Aug 2016 – Nov, 2020

📍 Kavre, Nepal

Fuse Machines AI Center, *fuse.ai*

Microdegree in Machine Learning | Deep learning

📅 Sept 2019 – March 2020

📍 Hattisar, Kathmandu

## EXPERIENCE

INTRODUCTION TO AI, INSTRUCTOR<sup>Experience Letter</sup>

Q. I. Roberts Jr-Sr High School, Florida, USA

📅 23 Aug, 2021 – Dec,2021

📍 Kathmandu, Nepal

- Included Modules: Introduction to AI, Python Programming, Data Structure and Algorithms, Numpy, Pandas and Matplotlib.

COMPUTER SCIENCE INSTRUCTOR<sup>Experience Letter</sup>

Herald International College

📅 Jun, 2021 – Oct, 2021

📍 Kathmandu, Nepal

- Teaching the course "Foundation in AI: Computer Science " to undergraduate BIT Final Year Students.
- Includes in-dept knowledge on Python Programming, Scientific Python, Data Structure and Algorithms, Database and Web Application Frameworks

MACHINE LEARNING ENGINEER<sup>Experience Letter</sup>

Fuse Machines Nepal

📅 July 2020 – September, 2021

📍 Kathmandu, Nepal

- Involved in design, review and refinement of contents: reading material, quizzes, assignments and projects for "Fusemachines AI Education Programs"- "MicroDegree™ in Artificial Intelligence: Machine Learning, Deep Learning and Natural Language Processing".
- Worked on Text-to-Speech Generation and Video Automation for Fusestudio, that focuses on creating a complete video from Google Slides and Scripts mimicking how a person presents given the same slide and script. This focused on the implementation of TTS with Tacotron2, GlowTTs, MelGAN and HiFi-GAN.

## ACHIEVEMENTS

Dr. Homi Jahangir Babha Scholarship Scheme-HJBSS

📅 2021-2023

- Sponsored by EdCIL and provided by the Embassy of India, Nepal to study M.Tech in Computer Science and Engineering at IIT, Hyderabad

Golden Jubilee Scholarship, Embassy of India Nepal

📅 2016-2020

- One of the 200 recipients of the prestigious GJS awarded by Embassy of India, Nepal for meritorious students.

Fuse Machines Artificial Intelligence Fellowship Program

📅 2019-2020

- One of the 100 recipients of the *fuse.ai* Artificial Intelligence Scholarship Online Course selected among thousands of candidates nationwide.

Kathmandu University Merit Based Scholarship

📅 2016, 2017

- Awarded for securing the highest GPA in the Computer Engineering cohort in the 2<sup>nd</sup> and 6<sup>th</sup> semesters respectively. The scholarship was worth \$520 each semester.

## PROJECTS

Fuse Studio, Video Automation

- This project automates video generation process avoiding the need of manual voice recordings and slide presentations. Slides created in Google Slides are used to generate videos by implementing Text-to-Speech algorithms and Video generation tools.

Fake News Detection

- Application of Natural Language Processing that focused on generating embeddings using N-grams, Word2vec trained on Wikipedia data. LSTM with Attention mechanism was used as a baseline model.

Self Diagnosis

- A computer aided diagnosis approach to detect potential diseases based on symptoms. Baseline models were Naive Bayes, 4-layerd deep neural network and Gradient Boosted Tree(XG-Boost). best performing model was implemented in detecting Tuberculosis and Hepatitis.

Clickbait Detection

- A textual data was characterised using ten important attributes combined with word embeddings and modelled using RNN and LSTM with attention to classify clickbait headlines in online news.

## CERTIFICATIONS

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- NVIDIA Deep Learning Institute(DLI) Certificates (Jan-Feb)
  - Fundamentals of Deep Learning, Feb. 19
  - Accelerating Data Engineering Pipelines, Feb. 12
  - Fundamentals of Accelerated Data Science with RAPIDS, Feb. 5
  - Accelerated Computing with CUDA Python, Jan. 29
  - Accelerated Computing with CUDA C/C++, Jan. 22
- AWS Certified Machine Learning – Specialty, Amazon, August 31, 2021
- How to win Data Science Competition: Learn from Top Kagglers, October 1, 2020
- Docker for the Absolute Beginner - Hands On - DevOps
- Complete Google Slides Course-Create Stunning Slides
- Machine Learning from Beginner to Advance
- Python for Machine Learning with Numpy, Pandas and Matplotlib
- Complete Git Guide: Understand and master Git and Github, Udemy
- Linear Algebra by Gilbert Strang - MIT Lecture Series, Youtube
- Statistics and Probability, Khan Academy
- Building Recommender Systems with Machine Learning and AI, udemy
- Effective Client Communication, Fuse Machines Inc., July 23, 2020

## PARTICIPATION

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- Industry Lecture Series
  - Bamdev Mishra, Principal Applied Scientist at Microsoft India April 6, 2022
  - Document Scanning in Mobile devices: Challenges and Applications by Soumyadeep Dey, Data and Applied Scientist at Microsoft, India. April 1, 2022
  - Deep Learning for Compilers by Dr. Dibyendu Das, Sr. Principal Engineer, Intel India, February 16, 2022
  - Ashtanga AI : An Eight Layered AI Stack for Complex Ecosystems by Dr. Shailesh Kumar (Chief Data Scientist, Reliance JIO, January 29, 2022
- Participation in Symposium on Artificial Intelligence for Sustainable Development
- Participation in Online Research Paper Writing Training conducted by Nepal Institute of Research and Communications
- Participation on 3<sup>rd</sup> National Workshop on Machine Learning and Data Science, 2020
- Participation in Prixa Excellence Award for Project RentSpace
- Participation in Arduino Workshop, K.U. Robotics Club
- Participation in HYL B Leadership Training, Team NEPO & Habitat for Humanity Nepal and Center for Creative Leadership
- Participation in 3 Days Webinar on cyber security and cyber space organised by Oxford Stem, Code For Change

## TECHNICAL SKILLS

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<b>Languages</b>	Python,C,C++, PHP, SQL
<b>Libraries</b>	Pytorch, Hugging Face, Keras, Tensorflow, Scikit-Learn, NLTK, OpenCV, Numpy, Pandas
<b>Tools</b>	Jupyter Notebook, Prezi, GitHub, Sphinx, Conda, Nbgrader, Arduino
<b>Others</b>	Latex, Prezi, Draw.io, SSH, Linux

## OTHER PROJECTS

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- Coursework Projects (Paper Implementations)
  - Zero-Reference Deep Curve Estimation (Zero-DCE) for Low-Light Image Enhancement, CVPR, 2020
  - Federated Semi-supervised Medical Image Classification via Inter-client Relation Matching, MICCAI, 2021
  - Generative Adversarial Networks for creating a custom National Flag
  - Asteroid Avoiding Game using Reinforcement Learning
- Emotion Detection and Sentiment Analysis
- Generation of Reading Materials, PDF using custom latex templates
- Kinmail, E-commerce B2B Platform
- Image Captioning using CNN and LSTM
- Rent Space Mobile Application Platform
- Simulation of sorting algorithms using OpenGL

## PUBLICATIONS

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Hostility Detection in Online Hindi-English code-mixed Conversations" by Aditi Bagora, Kamal Shrestha, Kaushal Maurya and Maunendra Sankar Desarkar accepted in 14th ACM Web Science Conference 2022, Barcelona, 26 - 29, June, 2022

## REFREES

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### Associate Prof. Dr. Bal Krishna Bal, PhD

Department of Computer Science and Engineering, DoCSE School of Engineering, Kathmandu University

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🌐 <http://ku.edu.np/cse/faculty/bal>

### Lecturer, Dr. Prakash Poudyal, PhD

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