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Khushkumar Patel

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Education

University of Windsor — 2019 - Present
Master of Applied Computing
(Stream: Artificial Intelligence) recognized by the Vector Institute
CGPA: 85/100 | Grade: A

Ganpat University — 2015 - 2019
B.Tech. in Computer Science and Engineering
(Specialization: Cloud Based Applications) in association with IBM
CGPA: 8.55/10.00 | Grade: A

Computer Vision Nanodegree — 2019 - 2019
- CNN Architectures
- Feature Vectors
- YOLO
- RNNs and LSTM
- Attention Mechanism
- Image Captioning

Deep Learning Nanodegree — 2019 - 2020
- Gradient Descent
- Training Neural Networks
- Transfer Learning
- Autoencoders
- Style Transfer
- Word Embeddings
- Word2Vec
- Deep Convolutional GANs
- Pix2Pix
- AWS Sagemaker

Experience

Machine Learning Engineer — May 2019 - Aug 2019
DataThinker AI
Project: DentalX | Deep Learning (Computer Vision)
Visually Intelligent Dental X-Ray Diagnosis - DentalX is a trained model that detect each of the dental diseases and provides recommendation to the dentist.

Machine Learning Intern — Dec 2018 - Apr 2019
Azilen Technologies (AI Unit: Intellica.AI)
Project: SpectoMETER | Deep Learning (Computer Vision)
Brand Visibility Analytics Platform for Marketers
Advertisement logo detection in live sports event and generate statistics for brand impact. I have used Convolutional Neural Network and Object Detection techniques using TensorFlow and OpenCV frameworks.

Projects

Generate Faces | Computer Vision (GAN)
Generating faces from pair of multi-layer neural networks Generator and Discriminator that compete against each other until one learns to generate realistic images of faces using CelebFaces Attributes (CelebA) Dataset.
Concepts: GAN, DCGAN, Pix2Pix and CycleGAN

Automatic Image Captioning | Computer Vision & NLP
Combine CNN and RNN knowledge to build a deep learning model that produces captions given an input image. CNN that transforms an input image into a set of features, and an RNN that turns those features into rich language.
Concepts: Faster R-CNN, YOLO, Single Shot Detection(SSD), LSTM

TV Scripts Generation | NLP
Built own Recurrent Networks and Long Short-Term Memory Networks with PyTorch to perform sentiment analysis and generate new text, and used recurrent networks to generate new text that resembles a training set of TV scripts.
Concepts: LSTM, Word2Vec and Sentiment Prediction

Facial Keypoint Detection | Computer Vision

Used image processing techniques and deep learning techniques to detect faces in an image and find facial keypoints, such as the position of the eyes, nose, and mouth on a face.

Concepts: Convolutional Neural Network, Image Segmentation

Patent

An Angularly and Laterally Displaceable Seat for Vehicles   **May 2016**

Patent Application No.: 3548/MUM/2014

Publication Authority: Intellectual Property India

Research

Cataract Classification using Inception, VGGNet, ResNet   **Dec 2019**

Investigate the performance of three different models, such as VGGNet, ResNet, and Inception on the same dataset, which contains the 4 classes for cataract detection and comparison of the result for the same models.

Skills

- **Programming** : Python, Java, J2EE, C/C++, Shell Scripting
- **DL Frameworks** : TensorFlow, PyTorch, OpenCV
- **ML Libraries** : scikit-learn, Seaborn, pandas, NumPy, Matplotlib, Bokeh
- **Data Science Tools** : Jupyter Notebook, Spyder, Weka, RapidMiner Studio, Canopy, MatLab
- **Cloud** : IBM Bluemix, Amazon Web Services, Google Cloud Platform
- **IoT** : Raspberry Pi, Arduino, Sensors, Micro Controller
- **Databases** : NoSQL, MySQL, IBM DB2, MS SQL
- **Web** : HTML/HTML5, CSS, JavaScript, BootStrap, UI/UX Design
- **OS** : Ubuntu, Windows
- **Other** : GitHub, LaTeX, Digital Media

Scholarships

- Facebook Secure and Private AI Scholarship
- Facebook PyTorch Scholarship
- Intel Edge AI Scholarship
- Bertelsmann Technology Scholarship
- Facebook Developer Circles Training Courses 2019

Honours

- Facebook Developer Circle Facilitator for Deep Learning Study Group
- Google Facilitator for Applied CS Skills
- Honor Medal in I-SWEEEP 2016 International Science Fair at Houston, Texas
- IGNITE Award by Dr. APJ Abdul Kalam (Former President of India)
- Director General Award 2018 from Ganpat University

IBM Badges

- Deep Learning
- Machine Learning with Python
- Applied Data Science with Python
- Data Science Foundations
- Big Data Foundations

Certifications

- IBM Cloud Application Developer 2018 - Mastery Award
- Google Cloud Platform Fundamentals
- Google Applied CS with Android
- Google Code-in
- Scientific Computing using Python by FOSSEE, IIT Bombay