WINS GOYAL

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EDUCATION

University of Florida, Gainesville, Florida — *Aug 2019–Dec 2020*

Master of Science - Computer Science, Herbert Wertheim College of Engineering — *GPA: 3.89/4.0*

- *Courses:* Distributed Operating Systems, Analysis of Algorithms, Database Systems and Implementation, Mathematics for Intelligent Systems, Machine Learning, Projects in Data Science

Indian Institute of Technology (IIT) Jodhpur, Rajasthan, India — *July 2011–May 2015*

Bachelor of Science, Computer Science and Engineering

- *Relevant Courses:* Complex Networks, AI & Pattern Recognition, Image Processing, Neuroscience

TECHNICAL SKILLS

- ***Proficient:*** Python, C++, Java, Elixir, Ruby, PostgreSQL; ***Familiar:*** JavaScript, JSON, MATLAB, HTML/CSS
- ***Framework/platforms:*** Anaconda, Django, Phoenix, Ruby on Rails, AWS S3/CLI, RTOS, Bitbucket, Git
- ***Machine Learning lib.:*** TensorFlow, Keras, PyTorch, OpenCV2, Numpy, Scikit, Pandas, MatplotLib, PIDs

PROFESSIONAL EXPERIENCE

Jr. Research Engineer, **IoTSPACE Pvt. Ltd.,** Maharashtra, India — *Jan 2018–Apr 2019*

- Evaluated IoT based product designs and the execution of the *Mesh & MQTT* based networking app.
- Solved *brown-out memory flush* issues, and implemented heuristic failure tolerance on Raspberry Pi 3.

Software Engineer, **Voylla Fashions Pvt. Ltd.,** Rajasthan, India — *May 2015–Dec 2016*

- Developed '***Virtual Try-On***' - interactive web-app to virtually try jewelry online - using *HTML5 Canvas* & *Object-tracking JS frameworks*. Devised optimal ***Data Centralization process*** by ELT/ETL mechanisms.
- Implemented automation of accurately fitting Jewelry images on Model images using AWS S3, standardizing ***Image-processing*** through synchronized *Python, Ruby, AWS CLI, Photoshop Action Scripts* and *Shell scripts*.
- Worked on *backend/frontend optimizations* including data-indexing & garbage-collection issues.

GRADUATE RESEARCH WORK

Algorithms for Plant Phenotyping, *Machine Learning & Sensing Lab* — *Mar 2020–present*

- Devising optimal algorithms to extract & analyse roots length, density, contours and structure using OpenCV, Scikit, Variational Auto-encoder (VAE) and Markov Decision Processes (MDP).

Hypotheses Generation, Data Science Research Lab — *Jan 2020–present*

- Designed evaluation metrics for Query Inferencing over DARPA provided Knowledge Base (KB) using *pre-trained Embeddings* & *TF-IDF scores*. Appended topK-coherent predicates to XML file.
- Automating summary generation for graphs created from DBpedia articles using *Seq2Seq with attention*.

PERSONAL / ACADEMIC PROJECTS

Ensemble Learning model for Optical Character Recognition

Course Project, Fundamentals of Machine Learning, University of Florida — *Nov 2019–Dec 2019*

Enhanced the preprocessed input by extracting character contours using ***shape-context descriptor algorithm***. Achieved ~96% recognition accuracy implementing KNN model fed with PCA-applied character images.

Actor Model Applications in Distributed Systems

Projects in Distributed Operating Systems, University of Florida — *Sep 2019–Dec 2019*

Implemented paper on '***Resilient Tapestry Overlay***' using backpointers incorporated distributed hash-tables. Evaluated '***Gossip Algorithm***' on different large scale network topologies. Established web-sockets with Genserver-Supervisor architecture for Twitter Engine simulator using ETS Storage and Phoenix framework.

Self Driving Car Engineer — *Jan 2017–Dec 2018*

Traffic Sign Classifier, Behavioral Cloning, Extended Kalman Filters, Kidnapped Vehicle, Feedback system

Drug-Similarity & Drug-Target Interactions Models

B.tech Final Year Project, IIT Jodhpur — *Aug 2014–Apr 2015*

Programmed a model to classify Drug-targets & analyzed Jaccard, J++ indices with RoC curves, significantly reducing Drug Pipeline Process and creating accurate metrics of predicting Drug Repositioning.

ACHIEVEMENTS / AWARDS

#UdacityKPITScholar: Achieved Scholarship for '*Self Driving Car Engineer*' nanodegree — *Jan 2017–Dec 2018*

Merit-cum-Means Scholar: Achieved tuition fee waiver for best Academic performance — *Jul 2012–Apr 2013*

EXTRA-CURRICULAR

- *MOOCs (Audits):* Deep Learning Specialization Course *(Coursera)*, Underactuated Robotics *by MIT (Edx)*
  - Undertook project on '*Anatomical Brain Segmentation*' as part of the course (citing Qure.ai blog), *2017–2018*
- Pioneered *First Robotics Summer Camp* at IIT Jodhpur in *Summer 2013* for 8 interdisciplinary teams
- Obtained hands-on practice on MEMS, Actuators in '*Mechatronics and Robotics*' *course* by *IIT Indore (July 2013)*