

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–May 2020
• 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–Apr 2020
• 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)