

# WINS GOYAL

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## EDUCATION

**University of Florida**, Gainesville, Florida

Aug 2019–May 2021

Master of Science - Computer Science, Herbert Wertheim College of Engineering

GPA: 3.89/4.0

Courses: Distributed Systems, Algorithms, Database Systems and Implementation, Mathematics for Intelligent Systems, Machine Learning, Projects in Data Science, System Design Principles, Network Data Streaming

**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, Operating Systems

## TECHNICAL SKILLS

- **Proficient:** Python, C++, Java, Elixir, Ruby, R; **Web Technologies:** JavaScript, React.js, Node.js, HTML/CSS
- **Database / Streaming:** PostgreSQL, MongoDB, Airflow, Cassandra, Kafka, Spark, AWS Redshift, AWS S3
- **Framework / Platforms:** Django, Flask, Ruby on Rails, Docker, Gtest, Spyder, DialogFlow, Unity, Jupyter
- **ML/NLP:** SpaCy, OpenIE, TensorFlow, PyTorch, OpenCV2, Numpy, Scikit, Pandas, Matplotlib, MATLAB

## PROFESSIONAL EXPERIENCE

**Jr. Research Engineer, IoTSPACE Pvt. Ltd.**, Maharashtra, India

Jan 2018–Apr 2019

- Enhanced data security by ~80%, by encoding the MQTT protocol over a Mesh topology of IoT products.
- Solved *brown-out memory flush* and failure tolerance issues to prevent data loss on Raspberry Pi 3 & Arduino.

**Software Engineer, Voylla Fashions Pvt. Ltd.**, Rajasthan, India

May 2015–Dec 2016

- Lead a team of 3 in developing an interactive web-app - '**Virtual Try-On**' - to virtually try jewelry online.
- Devised a **Data Centralization process** by ETL mechanisms to act as feed to the Data Visualization tools.
- Automated and standardized ~70% of image-editing task of accurately fitting Jewelry images on Model images increasing the output of Image-processing team *from 100 images/day to 1000 images/day*.

## GRADUATE RESEARCH WORK

**EdgeVPN (Open Source)**, Adv. Computing & Info. Systems (ACIS) Lab

May 2020–present

- Upgraded Tincan and WebRTC files of P2P-based VPN Software, and integrated new WebUI & WebService.

**Graph-to-text Representation**, Data Science Research (DSR) Lab

May 2020–present

- Implemented Variational Auto-encoder with Attention based Seq2Seq models to measure the accuracy of Sentence-Triples-Sentence conversion using *SpaCy*, *NLTK*, *OpenIE* & *pySpark* on large Wiki Dumps.

**Hypotheses Generation**, Data Science Research (DSR) Lab

Jan 2020–Apr 2020

- Designed evaluation metrics for Query Inferencing over DARPA provided Knowledge Base (KB) generating more coherent and generalized hypotheses using *pre-trained Embeddings* & *TF-IDF scores*.

## PERSONAL / ACADEMIC PROJECTS

**Data Engineering Nanodegree**, Udacity

Jul 2020–Aug 2020

- Modeled a cloud data warehouse to optimize data analytics for the music-streaming app.
- Configured and debugged production data-pipelines with Airflow and star-schema architecture.

**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

- Successfully implemented a paper on '**Resilient Tapestry Overlay**' using backpointers incorporated DHTs.
- Analyzed '**Gossip Algorithm**' performance on different large network topologies. Established web-sockets with Genserver architecture for Twitter Engine simulator using ETS Storage and Phoenix framework.

**Self Driving Car Engineer**, Udacity 📄

Jan 2017–Dec 2018

- Developed Traffic Sign Classifier, Behavioral Cloning, Extended Kalman Filters, Kidnapped Vehicle projects.

## 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

- **Coursera Specializations:** Deep Learning Course (2017-2018), Natural Language Processing (July-Aug 2020)
  - 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