# 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, 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, Spark, AWS Redshift, AWS S3
- ***Framework / Platforms:*** Django, Phoenix, Flask, Ruby on Rails, Dockers, Gtest, Spyder, Jupyter, CLion
- ***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* — *July 2020–present*

- 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