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: 3.8/4.0*
- *Courses:* Distributed Systems, Advanced Data Structures, Database Systems Implementation, Data Streaming, Computer System Design, Machine Learning, Projects in Data Science, Deep Neural Networks

Indian Institute of Technology (IIT) Jodhpur, Rajasthan, India — *Jul 2011–May 2015*
Bachelor of Science, Computer Science and Engineering
- *Courses:* Complex Networks, Operating Systems, Computer Networks, AI & Pattern Recognition, Image Analysis

PROFESSIONAL EXPERIENCE

Jr. Research Engineer, **IoTSPACE Pvt. Ltd.,** Maharashtra, India — *Jan 2018–Apr 2019*
- Enhanced data security by 70%, by encoding the *MQTT* protocol over a Mesh topology of swarmed IoT products.
- Detected and resolved *brown-out memory flush* and *failure tolerance* issues to prevent data loss on remote network.

Software Engineer, **Voylla Fashions Pvt. Ltd.,** Rajasthan, India — *May 2015–Dec 2016*
- Lead a team of 3 and developed an interactive webApp - '***Virtual Try-On*'** - to virtually try jewelry online.
- Pioneered a ***Data Centralization process*** by ETL mechanisms to act as feed to the Data Visualization tools.
- Automated and standardized 80% of the image-editing task of accurately fitting Jewelry images on Model images increasing throughput of the Image-processing team *from 100 images/day to 1000 images/day*.

RESEARCH EXPERIENCE

EdgeVPN (*Open Source*), *Adv. Computing & Info. Systems (ACIS) Lab* — *May 2020–Aug 2020*
- Modified 50% of the existing libraries to resolve integration issues while upgrading EdgeVPN (*a P2P-based decentralized VPN software in C++ & Python*) with the latest stable version packages of Tincan and WebRTC.
- Improved visual simulation and testing of nodal communication reducing overhead by 30% (*Flask, React & Node*).

Long-term Traffic Forecasting, *Modern AI & Learning Technologies (MALT) Lab* — *May 2020–Aug 2020*
- Tuned *attention-based Spatio-Temporal Graph-Convolutional Networks* to improve recall on predicting a long-term traffic behavior at city intersections by incorporating route connections & cause-and-effect scenarios.

Graph-to-text Representation, *Data Science Research (DSR) Lab* — *Jan 2020–Apr 2020*
- Implemented Variational Auto-encoder with *attention based Seq2Seq models* to enhance the accuracy of Sentence-Triples-Sentence conversion using *SpaCy, NLTK, OpenIE & pySpark* on large Wiki Dumps.

PROJECTS

Network Traffic Measurement, *Network Data Streaming* — *Sep 2020–Nov 2020*
- Quantified packet-loss and examined sampling on b & c sketches (*Bloom Filters, Active Counters, Virtual BitMaps*).

Music Streaming App & Fake Data, *Data Engineering Nanodegree, Udacity* — *Jul 2020–Aug 2020*
- Achieved 68 GB/hr processing rate on pipeline created using Airflow including ETL jobs and data warehouse.

Database Engine, *Database Systems Implementation* — *Jan 2020–Apr 2020*
- Created a single-user Database Management System supporting SQL and relational-algebraic operations.
- Developed modules like DB Files with heap and sorting, and lexer-parser for query evaluation and optimization.

Ensemble Learning model for Optical Character Recognition — *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.

Tapestry-style P2P Network & Twitter Clone Simulation — *Sep 2019–Dec 2019*
- Implemented the paper on '***Resilient Tapestry Overlay*'** using DHTs with backpointers for a 10000-node net.
- Analyzed '***Gossip Algorithm*'** on various network topologies of >8000 nodes. Evaluated twitting and querying on Twitter-clone by a 1000-actors net using Web-sockets, ETS Storage, and Phoenix framework.

SKILLS

- **Languages / Web:** *Python, C++, Java, Scala, Elixir, Go, JavaScript ES6, React, Node, HTML/CSS, Akka*
- **Frameworks:** *Django, Spring MVC, Docker, Junit, Kubernetes, REST/gRPC, Flask, DialogFlow, GCP*
- **Data:** *MongoDB, PostgreSQL, Kafka, Spark, Hadoop, ETL, MySQL, Cassandra, Airflow, AWS S3/EC2*
- **ML / NLP:** *SpaCy, OpenIE, Numpy, Scikit, Pandas, NLTK, TensorFlow, Keras, PyTorch, OpenCV2, Matplot*

LEADERSHIP & EXTRA-CURRICULAR

- ***Mentor (SwampHacks)***, annual hackathon at University of Florida — *2020*
- ***General Secretary***, *Design & Arts Society* at IIT Jodhpur, elected by 1000 students — *2013-2014*
- ***Chief Organizer***, 1st *Robotics Summer Camp* at IIT Jodhpur funding 8 interdisciplinary teams — *2013*
- 1st Runner-up team in *Micro-Air Vehicle (MICAV)* national competition by DRDO & NAL — *2012-2013*

ACHIEVEMENTS

Outstanding International Student Award by UF for continued involvement & contributions in Univ. — *Nov 2020*
#UdacityKPITScholar: Achieved Scholarship for '*Self Driving Car Engineer*' nanodegree — *May 2017*