

## 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 & Implementation, Network Data Streaming, System Design, Machine Learning, Projects in Data Science, Programming Lang. Principles

**Indian Institute of Technology (IIT) Jodhpur**, Rajasthan, India

Jul 2011–May 2015

*Bachelor of Science, Computer Science and Engineering*

- **Courses:** Complex Networks, AI & Pattern Recognition, Image Processing, Operating Systems

## 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 the image-editing task of accurately fitting Jewelry images on Model images increasing the output 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

- Integrated latest stable version packages of Tincan and WebRTC to EdgeVPN (a P2P-based decentralized VPN software in C++ & Python). Tested & modified existing class methods as per the upgraded packages.
- Re-designed the WebUI and Webservice for the visual simulation of Software testing (Flask, React & Node).

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

May 2020–Aug 2020

- 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.

## PROJECTS

**Unix-based Network File System**, Principles of Computer System Design

Sep 2020–Nov 2020

- Creating RPC-based NFS to run on multi client-server system with logging, virtualization, data redundancy.

**Music Streaming App**, Data Engineering Nanodegree, Udacity

Jul 2020–Aug 2020

- Modeled a data warehouse to optimize data analytics. Configured data pipelines & star-schema architecture.

**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 Overlay & Twitter Clone Simulation**, Distributed Systems 

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.

## SKILLS

- **Languages/Web:** Python, C++, Java, Scala, Ruby, R, C#, JavaScript, React.js, Node.js, HTML/CSS
- **Database:** MongoDB, PostgreSQL, Kafka, Spark, MySQL, Cassandra, Airflow, Redshift, S3, GCP
- **Frameworks:** Django, Docker, Kubernetes, Junit, Flask, Gtest, DialogFlow, Unity, Jupyter, ETL
- **ML/NLP:** SpaCy, OpenIE, Numpy, Scikit, Pandas, NLTK, TensorFlow, PyTorch, OpenCV2, Matplotlib

## 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**, 1<sup>st</sup> Robotics Summer Camp at IIT Jodhpur funding 8 interdisciplinary teams 2013
- 1<sup>st</sup> Runner-up team in Micro-Air Vehicle (MICAV) national competition by DRDO & NAL 2012-2013
- Deployed a low-cost PV-panel Cleaning Robot, Solar Park, Phalodi (Larsen & Turbo) 2012

## ACHIEVEMENTS

Academic Achievement Award waiving \$4500 fee by UF for best academic performance  
 #UdacityKPITScholar: Achieved Scholarship for '*Self Driving Car Engineer*' nanodegree

Aug 2019–Dec 2020

May 2017–Dec 2018