

**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, Algorithms, Database Systems & Implementation, Network Data Streaming, System Design, Machine Learning, Projects in Data Science, Deep Neural Network

**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).

**Long-term Traffic Forecasting**, Modern AI & Learning Technologies (MALT) Lab

May 2020–Aug 2020

- Evaluated 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

May 2020–Aug 2020

- Implemented Variational Auto-encoder with Attention based Seq2Seq models to measure the accuracy (BLEU score) 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

- Emulated a fault-tolerant multi-server RAID-5 like RPC-based NFS with RSM locks for race-conditions.

**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-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, R, Go, Elixir, JavaScript, React, Node, HTML/CSS
- **Frameworks:** Django, Spring MVC, Docker, Junit, Kubernetes, Flask, Gtest, DialogFlow, Jupyter, Unity
- **Database:** MongoDB, PostgreSQL, Kafka, Cassandra, MySQL, ETL, Spark, Airflow, AWS S3, Google Cloud
- **ML / NLP:** SpaCy, OpenIE, Numpy, Scikit, Pandas, NLTK, TensorFlow, PyTorch, OpenCV2, Matplotlib

**LEADERSHIP & EXTRA-CURRICULAR**

- **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**

Outstanding International Student Award by UF for continued involvement &amp; contributions in Univ.

Nov 2020

#UdacityKPITScholar: Achieved Scholarship for 'Self Driving Car Engineer' nanodegree

May 2017