

EDUCATION

Master of Science - Herbert Wertheim College of Engineering (University of Florida)
Computer Science

Aug 2021 - Present

Bachelor of Technology – Maharshi Dayanand University
Electronics & Communication Engineering

Jul 2009 – Jun 2013

PROFESSIONAL EXPERIENCE

Graduate Research Assistant - University of Florida

Jan 2022 - Present

- Working on prediction of acoustic parameters like equivalent sound level from traffic video feeds, contributing towards estimating and simulating environmental noise generated by traffic through video feeds.

Data Scientist: Classic Informatics Pvt Ltd

Apr 2021 - Aug 2021

- Proposed and developed a prototype computer vision system for land use classification from aerial images, helping the client cut down manual work of labeling images and at the same time save a considerable amount of productive time.
- Built an object detection model for human detection fine tuned over thousands of images, helping the client accurately detect humans in images as a preprocessing step for human pose estimation.

Freelance - Machine Learning Engineer (NLP): Snap Pe

Dec 2020 – Mar 2021

- Developed a text processing module for extracting shopping lists from text messages and processing them into digital shopping carts, saving clients from a substantial amount of manual work and enabled them to leverage the increased checkout throughput.
- Implemented a fast product search functionality using Elasticsearch, drastically improving user experience by reducing search times by at least 75%.

R&D Intern (Machine Learning and Machine Vision): Axelta Systems Pvt Ltd

Jan 2019 –May 2020

- Assisted development of a fast deep neural network based face detection system to replace AWS Rekognition with an in-house solution which helped reduce the subscription fees for customers by almost 30%.
- Developed an accurate face recognition and face clustering system hosted on AWS, helping businesses identify repeat customers and serve them better by reducing the checkout times.
- Created a video analytic system based on motion to identify customer flow through a retail store, helping plan an effective advertisement placement strategy.
- Developed a solution to detect defects utilizing visual template matching and implemented a random forest algorithm for predicting the final quality of the product, automating the process defect detection which helped reduce the manufacturing rework by 85%.

Senior Software Engineer: Accenture Solutions Pvt Ltd

Dec 2013 – Dec 2018

- Handled software development cycles in SAP ERP for various industries across the globe.
- Handled technical design, build, unit testing and maintenance of ERP applications from finance and logistics.
- Collaborating with Business Analysts, led a team of developers to transform business requirements into software applications.
- Resolved high priority production issues ranging from job failures to bugs.

PERSONAL PROJECTS

- **Review Analytics** : Generated actionable insights from thousands of customer reviews scraped from Amazon for smartwatches, helping identification of the major deficiencies and flaws in the product. This involved scraping of website data, heuristic analysis using parts of speech tags, learning sentiment driven word embeddings and visualization using PCA and TSNE.
- **Neural Machine Translator** : Created a neural network model to accurately translate Spanish to English . This involved training a seq2seq LSTM with an attention mechanism.
- **Medley** : Generated music through a sequence to sequence model trained on Western Classical music. This involved processing of MIDI's into data tensors and training a discriminative model to predict the voice leading over time.

PROFICIENCIES

- Machine Learning, Artificial Intelligence(AI), Deep Learning with applications in Computer Vision, Natural Language Processing, and Data Science.
- Exploratory Data Analysis, Predictive Analytics, Data Visualization.
- Python, TensorFlow, PyTorch, Scikit-learn, OpenCV, Numpy, Seaborn, Pandas, AWS, SQL.