

Sheel Dey

🏠 Bryan, TX 📞 979.739.0962 ✉️ sheelabhadra@gmail.com in sheelabhadra
🐱 sheelabhadra 🌐 sheelabhadra.github.io 📺 Sheelabhadra Dey

EDUCATION

TEXAS A&M UNIVERSITY

M.S. IN COMPUTER SCIENCE
May 2019 | College Station, TX
GPA: 3.56 / 4.0

NIT TRICHY

B.S. IN ELECTRONICS AND
COMMUNICATION ENGINEERING
May 2015 | Trichy, India
GPA: 8.44 / 10.0

CERTIFICATIONS

UDACITY

SELF-DRIVING CAR ENGINEER
NANODEGREE
Computer Vision
Deep Learning

COURSERA

Machine Learning
AWS Fundamentals

UDEMY

The Complete SQL Bootcamp
Django Full Stack Web Development

SKILLS

PROGRAMMING

Python • C++ • R • SQL • HTML •
CSS • JavaScript • Matlab

TOOLS & FRAMEWORKS

OpenCV • Keras • TensorFlow • Flask
• Django • Docker • Numpy • Pandas
• Scikit-learn • Matplotlib • Pytorch •
MXNet • Git • Bash

MACHINE LEARNING

Linear Models • Decision Trees •
Ensembles • Convolutional Neural
Networks • Time Series Analysis

PUBLICATIONS

FreeStyle: A Sketch-based
Wireframing Tool 🐱

A Distributed Hybrid
Hardware-In-the-Loop Simulation
framework for Infrastructure Enabled
Autonomy 🐱

EXPERIENCE

RESEARCH ASSISTANT | TEXAS A&M HEALTH SCIENCE CENTER 🐱

Feb 2019 - May 2019 | Bryan, TX

- Developed an application for the Wang lab that optimized the manual process of counting neurons in rodent brain images,
- Implemented a GUI using Matlab backend that automatically processed the images and counted the neurons for users, reducing the time taken from 2-3 hours to under 15 minutes.

MACHINE LEARNING ENGINEER INTERN | BNSF RAILWAY

Aug 2018 - Jan 2019 | Fort Worth, TX

- Developed time series and regression models to predict the time to failure of railway track geometry (e.g. track gauge) for 32,500 miles of railway track.
- Engineered features such as cumulative million gross tonnage and time since last repair to handle sparse and irregularly spaced data obtained over 10 years.
- Achieved a Mean Absolute Percentage Error of 17% on the monthly forecasts for track gauge values which led to a reduction in maintenance cost.

RESEARCH ASSISTANT | TEXAS A&M TRANSPORTATION INSTITUTE 🐱

Jul 2017 - Aug 2018 | College Station, TX

- Implemented machine learning algorithms for real-time detection of emergency vehicle sirens around a self-driving car within 200 feet.
- Extracted 34 time and frequency-domain features from short audio clips.
- Achieved an F_1 score of 0.89 on cleaned Google's AudioSet dataset.

PROJECTS

REVIVING THE METRO BIKE SHARE IN LOS ANGELES 🏆

1st place, TAMU 2019 Data Science Competition

- Developed tree-based models with bike docking station density, population, income, and comments from people as features to suggest 15 locations for new bike docking stations in Los Angeles.
- Devised a feature called inherited success that took into account the trip-flow and distance of nearby stations to predict the trip-flow for a new station.

ACTIVITY RECOGNITION FROM LOW-RES VIDEOS 🐱

Machine Learning methods in Computer Vision

- Designed an ensemble of 3D ConvNets to classify human actions from low-resolution videos.
- Achieved a test accuracy of 85% of industry standards on 101 different actions.

GERMAN TRAFFIC SIGN RECOGNITION 🐱

Self-Driving Car Engineer Nanodegree, Udacity

- Trained a 5-layer ConvNet to classify 43 different types of German traffic signs achieving an accuracy of 94.5% on the test data.

FAKER: AMAZON ONLINE FAKE REVIEWS DETECTION 🎥

Information Storage and Retrieval

- Implemented a clustering algorithm to identify fake reviewers from a pool of 5000 randomly selected reviewers on Amazon.com.
- Grouped fake reviewers as outliers based on features such as usage of extreme sentiments, number of reviews, and time of posting reviews.