

Udaikaran Singh

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Education

University of California, San Diego, CA

Master of Science, Data Science, Sept. 2017 – May 2021

Selected Coursework: Deep Learning, Computer Vision, Introduction to Probability, Introduction to Statistics, Practices in Data Science, Data Structures & Algorithms, Mathematics of Finance.

GPA: 3.85

Skills

Programming/Scripting Languages: Python, Java, R, C++ (familiar)

Tools: PyTorch, TensorFlow, SciKit, SQL, Pandas, Git

Experience

Data Science Tutor

UCSD CSE Department, September 2018 – Present

- Tutored Introduction to Data Structures & Theoretical Foundation of Data Science
- Created 4 supplemental lectures for the course & aided in creating homework problems.
- Held office hours helping students with homework problems involving graph theory, probability theory, linear algebra, & basic data structures.

Research Assistant

Zhouwen Tu Lab, Summer 2019

- Created & trained deep learning GAN for image-to-image translation.
- Developed understanding of multi-domain image translation using cycle-consistent adversarial networks (Cycle-GAN).
- Developed understanding of deep reinforcement learning

Projects

Classifying Thoracic Diseases Using a CNN

- Created a CNN model using PyTorch & trained using a public dataset from the NIH X-Ray dataset.
- Learned How to create a custom loss function to deal with class imbalances.

Generating Beer Reviews Using an RNN

- Created an LSTM model using LSTM
- Learned how to deal with shrinking & exploding gradients with gradient clipping.

ArcGIS Coconut Tree Identification

- Used ArcGIS Pro to develop a training set for palm tree identification.
- Trained a classification model using a Single Shot Detector.