



## PROJECTS

### ARTIFICIAL INTELLIGENCE NANODEGREE | UDACITY

Sep 2017 – March 2018

#### Machine Translation

- Built a deep neural network that functions as part of an end-to-end machine translation pipeline; the completed pipeline accepts English text as input and returns the French translation
- Achieved 97% validation accuracy using an encoder-decoder architecture

#### Dog Breed Classifier

- Built an algorithm to identify a canine breed given an image of a dog; if given an image of a human, the algorithm identifies a resembling dog breed.
- Achieved 83% test accuracy by applying Transfer Learning on ResNet-50 model.

#### Time Series Prediction and Text Generation using RNN

- Built RNNs that can generate sequences based on input data
- Used real market data in order to predict future Apple stock prices using an RNN model
- Built an English language sequence generator using RNNs trained on The Adventures of Sherlock Holmes

### END-USER INFORMATION RETRIEVAL FROM BIM MODELS | IIT GUWAHATI

Jan - April 2016

Guide: Dr. D.N. Buragohain | Emeritus Professor and Founding Director, IIT Guwahati

- Developed a plugin in C# for Autodesk Revit that processes semantic queries allowing end users to extract information (quantity and cost estimate of the structural components)

## WORK EXPERIENCE

### FICO | ANALYTICS SCIENCE - SCIENTIST I

Bangalore, India | June 2016 – Present

- Developed a real-time, large-scale recommendation system that can be used by both brick and mortar retailers as well as an e-commerce platform
- Reduced model training time for Matrix-Factorization models from 8 hours to less than an hour by implementing a distributed algorithm and leveraging tools like Spark
- Developed a generic architecture for the software to support multiple optimization techniques (SGD, Adam, AdaGrad) and features like a non-negative constraint, regularization and missing value treatment
- Developed logistic regression and recency-frequency-monetary models in Python for marketing analytics
- Developed scoring systems for various models under Marketing Analytics using FICO's Streaming Analytics Solution
- Applied AdaBoost and GBDT to develop residual models over a proprietary time-series model
- Developed a model using topic modeling to analyze tweets and identify the problems faced by users pertaining to the launch of offer programs
- Developed a generic optimization solver for marketing batch optimization problems

## EDUCATION

### INDIAN INSTITUTE OF TECHNOLOGY

#### GUWAHATI | BTech in Civil Engineering

Jun 2016 | Guwahati, India • Cum. GPA: 7.84/10

#### MOOC

Artificial Intelligence Nanodegree | Udacity

Specialization: NLP

Machine Learning | Coursera

Introduction to Finance | Coursera

## Programming Languages

Proficient:

Java • Python

Intermediate:

R • Groovy • Mosel • FICO® Model Builder

Familiar:

Scala • MATLAB • C • C++

## DISTINCTIONS

### ACADEMICS

- Received sponsorship from FICO for Artificial Intelligence Nanodegree program
- Selected for Research Assistantship at NTU, Singapore
- Secured a rank in the top 0.7% students among 0.5 million candidates in IIT-JEE 2012
- Secured a rank in the top 2.48% students among 1.3 million candidates in AIEEE 2012

### LEADERSHIP

- Placement Coordinator for Department of Civil Engineering, Center for Career Development, 2015-16
- Batch Representative for Civil Engineering, Batch of 2016
- Selected in HBLMP, a nationwide initiative for nurturing young leaders from a pool of 1,743 applicants.
- Member of National Sports Organization- Volleyball, 2012-2014