

# Aniruddha Dave

DATA SCIENTIST · SOFTWARE ENGINEER

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## Experience

### FICO

#### ANALYTICS SCIENCE- SCIENTIST

Bangalore, India

June 2016 - Jan 2019

- Processing large volumes of data for generating statistics, training datasets (profile variables and tag), binning and implementing code for parallelization of supervised and unsupervised model training. Responsible for end to end model life cycle execution
- Reduced model training time for Matrix-Factorization models from 8 hours to less than an hour by implementing a distributed algorithm of stochastic gradient descent and leveraging tools like Spark
- Developed online scoring engine for recommender system to generate scores based on real time profile variables and model suite
- Implemented 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 using Mosel
- Implemented proprietary time-to-event algorithms using Hadoop and Map Reduce, in turn reducing the time taken for modeling from 3 days to around 2 hours which resulted in a faster delivery of the models to clients

### NANYANG TECHNOLOGICAL UNIVERSITY

#### SUMMER RESEARCH ASSISTANT , GUIDE : DR. ROBERT TIONG

Singapore

May 2015 - July 2015

- Identified key areas after an extensive literature review to improve the construction productivity using Building Information Modeling (BIM)
- Formulated methods to evaluate the BIM based productivity improvement in construction activities

### CENTRE FOR CAREER DEVELOPMENT, IIT Guwahati

#### PLACEMENT COORDINATOR, DEPT. OF CIVIL ENGINEERING

Guwahati, India

May 2015 - Apr 2016

- Acted as a liaison between the institute placement cell and the recruitment teams of companies
- Helped 120+ students with their career goals by organizing seminars and workshops

### HANGRR

#### BUSINESS LEADERSHIP AND MARKETING INTERNSHIP,

India

June 2014 - July 2014

- Led a team of 14 members to work on projects that were designed to develop business, leadership and marketing skills
- Conceptualized Internet Marketing to build up the site's visits and Alexa rank(worldwide increase of 60,000 in 2 months)
- Recognized as a top performer during the internship

## Education

### Indian Institute of Technology, Guwahati

#### B.TECH. IN CIVIL ENGINEERING, 7.84/10

Guwahati, India

June 2012 - May 2016

- **THESIS:** End-User Information Retrieval in BIM  
**Guide:** Dr. Dharendra Nath Buragohain, 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)
  - The plugin has functions to make queries regarding the structural information and to extract the structural data and export to .xls format. It also supports a user interface to visualize the elements in the 3D model
- **Relevant Courses** Mathematics I, II, III, Introduction to Computing, Computing Lab, Genetic Algorithms, Optimization Methods, Game Theory, Statistical Methods

### Artificial Intelligence Nanodegree, Udacity

#### SPECIALIZATION: NATURAL LANGUAGE PROCESSING

India

Sep 2017 - Mar 2018

- **Machine Translation System** Capstone Project
  - 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 using ResNet-50 model

## Certified MOOCs

COMPLETE LIST: [aniruddhadave.com/learnings](https://aniruddhadave.com/learnings)

- **Coursera:** Parallel, Concurrent, and Distributed Programming in Java (Specialization), Machine Learning, Build a Modern Computer from First Principles : From Nand to Tetris

## Skills

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<b>Programming</b>	Java, Python, C/C#, Scala, R, Mosel
<b>Development Tools</b>	Eclipse, Maven, Jupyter, PyCharm, Visual Studio Code, git, GitHub

## Projects

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<b>BIM Search</b>	C# Plugin for Revit to retrieve 3D information of structural elements
<b>DocScan</b>	Document Scanner based on OpenCV
<b>gitlit</b>	Light-weight implementation of git in Python
<b>nand2tetris</b>	Simple general purpose computer built using nand gates
<b>Simple-tcp</b>	Tcp server implementation in Java
<b>Simple-udp</b>	Udp server implementation in Java
<b>Construction-Optimization</b>	Multi-objective Time-Cost Optimization of Construction Activities using Genetic Algorithm
<b>Complete List</b>	<a href="https://github.com/aniruddhadave">github.com/aniruddhadave</a>

## Distinctions

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<b>Academics</b>	Ranked in the top 0.5% students among 0.56 million candidates in Indian Institute of Technology-Joint Entrance Exam 2012 Received sponsorship from FICO for Artificial Intelligence Nanodegree program Selected for Research Assistantship at NTU, Singapore
<b>Leadership</b>	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
<b>Sports</b>	Member of National Sports Organization-Volleyball, 2012-2014 Football, Horse-Riding, Boxing, Cycling