# **Gaurav Bhaskar Gite**

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**Education** Columbia University

Sept '15 – Dec '16

M.S. in Computer Science (Machine Learning Track)

GPA: 4.12/4.0

Relevant Courses: Machine Learning (Scored A+), Advance Machine Learning (Scored A+) and Neural Networks & Deep Learning (Scored A)

Indian Institute of Technology (IIT), Roorkee

July '11 – May '15

GPA: 8.568/10

B.Tech in Electrical Engineering

Experience

Google Inc. | Intern

May '16 – August'16

- Working with the Research and Machine Intelligence team to optimize the performance of RNN models on Android devices. RNN models would be used for next-word prediction and gesture prediction in the keyboard.
- Developed faster (~30%) implementation of LSTM and GRU cells in Tensorflow. Open-sourced the code.

Research

## **Center for Computational Learning System, Columbia University** | Researcher

Jan '16 – May '16

- Researched on automated methods for content assessment of written text.
- Developed an automated technique for grading of student writing based on the content. Research paper submitted to the International Journal of Artificial Intelligence in Education.

# Complex Resilient Intelligent Systems Lab, Columbia University | Researcher

Sept '15 – Dec '15

- Developed Multi-grain N-gram Topic Model conditioned on document meta-data to understand the structural relationship between terms in a corpus.
- Using the above topic model, 14656 journal papers (1990-2014) based on thin-film solar cells are explored for information related to the materials used and their properties, structure, performance and processing techniques.
- Research paper accepted at MLDM 2016 (International Conference on Machine Learning and Data Mining).

**Projects** 

#### **Facial Emotion Recognition System using Deep Learning**

Jan '16 – May '16

- Developed a system which can predict facial emotions. Achieved an accuracy of around 60%.
- Code is available <u>here</u>. Demo video can be found <u>here</u>.

### **Automated Essay Grading using Machine Learning**

May '15 - July '15

- Developed an automated essay scoring system.
- Extracted features such as count of parts of speech, average word length, spelling error, punctuation which indicate language fluency, dexterity, orthography, structure and organization of text. Used regression with least squares loss as the learning model.
- Achieved accuracy of 80% in the final model. Implemented in Python (feature extraction) & MATLAB(learning).

**Know your courses** 

Mav '15 – July '15

- Developed web application which provides a score to every course at Columbia University based on the sentimental analysis of the reviews. (reviews source culpa.info) Implemented in Python.
- gitegaurav123.appspot.com/knowyourcourses

# Implementation of MLP in VHDL

Jan '15 – May '15

- Developed a re-configurable Multi-layer Preceptron neural network in VHDL.
- Verified the accuracy and correctness by simulating the XOR and Fisher Iris problem.

Skills

**Preferred**: Python, C++, MATLAB, VHDL, TensorFlow, Theano

Familiar: C, Java, HTML, CSS, Bootstrap, SQL

Software Tools & Operating Systems: Mallet, Google APP Engine, Git, Linux, SQS, DynamoDB, AWS

Teaching Experience

**Teaching Assistant** – Advance Machine Learning, Columbia University, Spring '16

Teaching Assistant – Introduction to Computer Systems, Columbia University, Fall '15 & Spring '16

**Teaching Assistant** – Programming Language (C++) Columbia University, Fall '15

**Awards** 2016 Spring **Course Assistant Fellowship** for excellent performance as teaching assistant.