

# Shivam Kumar

Currently pursuing Undergraduate Program in Computer Science and Engineering at IIT GOA, INDIA

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## EDUCATION

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- **Indian Institute of Technology Goa** Goa, India  
*Bachelor of Technology in Computer Science and Engineering; GPA: 9.27* July 2016 – Present

## EXPERIENCE

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- **Indian Institute of Technology Goa** Goa, India  
*Machine Learning Intern* May 2018 - June 2018
  - Worked on a research project named Climate-change during summer 2018 under Dr. Clint P. George (Assistant Professor in the School of Mathematics and Computer Science at IIT Goa). This project was about using machine learning (ML) algorithms to find various factors responsible for the increase in temperature in the last few centuries.
- **Indian Institute of Technology Goa** Goa, India  
*Teaching Assistant (TA)* Aug 2017 - Dec 2017
  - TA under Dr. Abhiram Ranade (Professor in Department of Computer Science, IIT Bombay) for the course CS-101 (Introduction to Computer Programming and Utilization) in Fall 2017.
  - My job was to teach and guide freshmen in learning basics of computer programming.

## PROJECTS

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- **Image Captioning System:** Used a convolutional neural network (CNN) encoder and a recurrent neural network (RNN) decoder to produce descriptions for real-world images.
- **Single-Line Handwritten Sentence Recognition:** We used Kadane's algorithm, k-means clustering, CNN, RNN, long short-term memory (LSTM), connectionist temporal classification (CTC), language model (LM) and maximum likelihood estimation (MLE) to achieve the required functionality. We worked as a team of three for this project.
- **Facial Recognition System:** Used CNN, siamese neural network, and triplet loss to verify and recognize face of a person.
- **Chess Game:** Created a two player chess game using C++ as my term project for data structures and algorithms course.

## PROGRAMMING SKILLS

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- **Languages:** Python, C++, R, Java, JavaScript, HTML, CSS, LaTeX
- **Technologies:** TensorFlow, Keras, Jupyter Notebook, Linux, Android Studio, Django, Bootstrap, Firebase, Flutter
- **General Techniques:** Algorithm Design and Analysis, Web App Development, Mobile App Development
- **Machine Learning Techniques:** Deep Learning, Convolutional Neural Network, Autoencoders, Generative Adversarial Networks, Recurrent Neural Network, Unsupervised Learning, Dimensionality Reduction, Anomaly Detection, Recommender Systems

## COURSES WITH GRADES

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- **Courses (Grades):** Artificial Intelligence Course (**AA**) and Lab (**AA**), Linear Algebra (**AA**), Calculus (**BB**), Ordinary Differential Equations (**AB**), Data Structures and Algorithms Course (**AA**) and Lab (**AA**), Data Analytics (**AA**), Discrete Structures (**AB**), Design and Analysis of Algorithms (**AA**)

## SELF-TAUGHT COURSES

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- **Machine Learning by Stanford University** on Coursera, **Introduction to Deep Learning (With Honor)** by **National Research University Higher School of Economics** on Coursera, and **Exploratory Data Analysis** by **Johns Hopkins University** on Coursera

## ACHIEVEMENTS

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- **Secured AIR (All India Rank) - 3 in IMU CET 2016:** Entrance exam to get admission in the area of marine.
- **Secured AIR - 3120 in IIT JEE Advanced 2016:** Engineering college entrance examination in India.