Parikshit Bansal
Computer Science & Engineering
Indian Institute of Technology Bombay

170050040
UG Second Year
Male
DOB: 05/02/1999

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2019	9.65

Pursuing **Minors** in Centre of Studies in Resources Engineering

Scholastic Achievements

- All India Rank **62** in JEE Advanced among 20,000 candidates. [2017]
- Achieved **99.98** percentile in JEE Mains among 1.5 million candidates. [2017]
- Shortlisted for **Kishore Vaigyanik Protsahan Yojna** (KVPY) fellowship by **Government of India** for **two** consecutive years. [2015,16]
- **National Standard Examination in Chemistry** (NSEC) among top 1% nationwide. [2016]
- **National Standard Examination in Physics** (NSEP) among top 1% nationwide. [2016]

Key Projects and Internships

Othello Game Engine | *Prof. Amitabha Sanyal, IIT Bombay* | *Course Project* *Spring 2018*

- Devised an **Othello game engine** which efficiently constructs and traverses the game-tree using **minimax** algorithm optimized whith **alpha-beta pruning**.
- Implemented all the rules of othello and developed a **graphical user interface** for one-player game.
- Programmed various aspects of the same using **Imperative, Object Oriented and Functional Paradigms**.

Secure Personal Cloud Storage | *Prof. Soumen Chakrabarti, IIT Bombay* | *Course Project* *Ongoing*

- Constructing a **'zero-knowledge' cloud** server and client with end-to-end encryption using 256-bit **AES-GCM and RSA encryption** techniques with keys stored locally.
- Implementing multiple client **synchronization** and **file sharing**.
- Using **SSL/TLS with HTTPS** protocol for transfer between a client and the server.
- Developing a desktop client and an **Android app** for local encryption on multiple devices.

Facial-Recognition System | *WnCC* *Summer 2018*

- Built various **Regression algorithms** to gain insight into classification algorithms used in field.
- Learnt and programmed **PCA** Algorithm to dimensionally reduce the training FaceVectors to **EigenFaces**.
- Implemented **KNN algorithm** to classify an image based on it's projection on EigenFaces obtained.

Regex Engine | *Prof. Amitabha Sanyal, IIT Bombay* | *Course Project* *Spring 2018*

- Designed a regex engine to convert regex to **DFA (Determininstic Finite Automata)**.
- Fed strings into DFA machine to determine if it matches the regex.

Sat-Solver | *Prof. Amitabha Sanyal, IIT Bombay* | *Course Project* *Spring 2018*

- Implemented a program to solve Boolean satisfiability problem.
- Used **DPLL** procedure to implement the same using functional programming.

Sudoku Solver/Generator | *Prof. Amitabha Sanyal, IIT Bombay* | *Course Project* *Spring 2018*

- Developed a Sudoku Solver, which uses **Backtracking algorithm** to find the solution.
- Upgraded the solver to account for generating Sudoku problems, on the same using the same mechanism.

Technical Skills

Programming Languages
C/C++, Java, Python, LISP, MATLAB, Prolog, Bash

Web Development
HTML, CSS, Javascript, PHP

Softwares
Git, AutoCad, SolidWorks, LaTeX, Make, CMake, Adobe Illustrator, Photoshop.