

Shrey Bansal

COMPUTER SCIENCE - IIT DELHI

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EDUCATION BACKGROUND

Indian Institute of Technology , Delhi

Bachelor in Technology, Department of Computer Science & Engineering
Current CGPA - 9.765/10.0

New Delhi, India

July 2018 - Present

Lancers Army School

CBSE All India Senior School Certificate Examination 2018

Percentage: 94.3/100

Indian Certificate for Secondary School Examination 2016

CGPA - 10.0/10.0

Surat, India

April 2002 - April 2018

SCHOLASTIC ACHIEVEMENTS

- Awarded **IIT Delhi Merit Prize** consecutively for 2 semesters in 2018-19 for being in top 7 percentile.
- Secured All India Rank **175** in Joint Entrance Exam **Mains** - 2018 among 1.26 million candidates.
- Secured All India Rank **72** in Joint Entrance Exam **Advanced** - 2018 among 231,024 candidates.
- **NSE** (National Standard Examination) 2017- In top 10 position in the Merit List for Physics and Chemistry.
- Appeared in **INPhO** and **INChO** (2018).

PROJECTS

Real Time Vehicle Detection and License Plate Recognition

Prof. Anshul Kumar

August 2019-Present

- Working on a system to automatically track and recognize vehicles through number plate recognition.
- Aiming for a real time system working at 25 fps capture to monitor traffic violations and vehicle tracking.
- Implementing the design using CNN and connected component analysis , the final deployment will be in Python.
- Developing a Monitoring app for data collection and analysis.

Surface Roughness Prediction in Micro Milling considering the Workpiece Properties

Prof. Sunil Jha

October 2019-Present

- Working on a Machine Learning model to predict the surface finish considering the material properties of workpiece, material removal mechanisms and SFD (Spindle Speed, Feed Rate and Depth of Cut).
- Aiming to predict surface roughness of one material based on the data set obtained from some other material.
- Implementing the current design using Reinforcement Learning and Support Vector Regression, the final deployment will be in Python.

VGA Graphics Display with FPGA Basys-3 Board

Prof. Anshul Kumar

October 2019 - November 2019

- Designed a VGA Display Controller in VHDL for the timing circuit for VGA Display.
- Designed a BRAM memory reader in VHDL to display any image(in coe format) of any size (within 640 X 480) with zoom-in and zoom out feature controlled by a switch.
- Designed a Ping Pong game and Screen Saver on VGA display in VHDL with controllers on FPGA board.

Job Scheduler for Project Management using RBTree, Trie, Priority Queue in Java

Prof. Subodh Kumar

October 2019

- Designed a complete Project Manager for projects including flush for a company with basic query system.
- Jobs were stored in a MaxHeap Priority Queue and got completed according to their priority and runtime.

Ambient Light Sensor Using PMOD ALS with FPGA Basys-3 Board

Prof. Anshul Kumar

September 2019

- Designed a Logical Circuit to measure ambient brightness level, and displayed it using 7 segment display.

- Used Pulse Width Modulation in the LED for it to follow the ambient brightness.
- Designed a communication module in VHDL to communicate with PMOD ALS using ASI standards.

Database Management and Query System using Hash Tables in Java

Prof. Subodh Kumar
September 2019

- Designed a database using hash tables(Double Hashing and Separate Chaining with BST) in Java to store student records for a college with a basic query system.
- Designed a completely generic system to store data based on user requirements with minimal changes.

Symbolic Differentiator in Python

Prof. Subhasish Banerjee
April 2019

- Designed a symbolic differentiator in python using stacks which included all binary operations.
- Designed a parser and a calculator to differentiate any expression w.r.t given variable.

RELEVANT COURSES

- **Ongoing** : Computer Architecture, Programming Languages, Design Practices, Signal and Systems, Macro Economics
- **Finished** : Data Structures and Algorithms, Probability and Stochastic Processes, Discrete Mathematical Structures, Digital Logic and System Design, Linear Algebra and Differential Equation, Introduction to Calculus, Introduction to Programming
- **Self** : Machine Learning, Deep Learning, Data Analysis in Python, Android App Development, Web Development

TECHNICAL SKILLS

- **Languages** : C++, C, Java, Python, VHDL, SML, HTML, JavaScript, CSS
- **Softwares** : MATLAB, Xilinx ISE and Vivado, AutoDesk, Latex, Git, Android Studio
- **Libraries** : NumPy, Pandas, Scikit, PyTesseract, TensorFlow, Matplotlib, OpenCV

EXTRA-CIRRUCULAR

Finalist in TVS Credit E.P.I.C. IT Challenge

TVS Credit Services Limited, Chennai
November 2019 - Present

- Among the top 9 to be selected for the final round among thousands.
- Represented IIT DELHI in this national competition.

Executive at ACES-ACM

EXECUTIVE

IIT Delhi, Delhi
October 2018 - Present

- Executive in the society for Computer Science Engineering.
- Major role to organize events and workshops for the organization.

Summer Intern at ISafe Assist

Saket, Delhi
Jun 2019 - Jul 2019

- ISafe is 24*7 roadside assistance service, in collaboration with the Indian Road Safety Commission.
- Worked as a summer intern to spread awareness about roadside assistance and publicize ISafe.
- Created content like articles and helped in their system testing and improvement.

Designed Webapp for Nilgiri Hostel

IIT Delhi, Delhi
September 2019 - Present

- Designed a webapp for the hostel.
- Designed it for adding complaints and notify the concerned authorities.
- Developed in Android Studio , React Native.