

# ABHINAV BOHRA

Pre-final year undergraduate, Department of Computer Science & Engineering, IIT Kharagpur, India



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## EDUCATION

### B.Tech & M.Tech in Computer Science & Engineering

INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR, INDIA

Jul'18 - Present    Kharagpur, India    **GPA:** 9.39/10.0

- **Coursework:** Machine Learning, Probability & Statistics, Algorithms and Data Structures, Software Engineering, Computer Architecture and Organization, Compilers, Operating Systems, Computer Networks, Database Management Systems Formal Language & Automata Theory

### Class XII - Central Board of Secondary Education

Apr'16 - Mar'17    Ahmedabad, India    **Score:** 93%

### Class X - Central Board of Secondary Education

Apr'14 - Mar'15    Ahmedabad, India    **GPA:** 10.0/10.0

## INTERSHIPS

### ADOBE Inc., Research Intern

May 2021 - Present    Big Data Experience Lab, Bangalore

- Currently working on generation of responsive and semantic aware documents using multi-modal resources

### PHILIPS, Software Development Intern

Apr 2020 - Jun 2020    Philips Innovation Campus, Bangalore

- Designed, developed & deployed Machine Learning based software to predict software vulnerabilities for optimizing software testing process
- Fine-tuned various models like SVMs, Multinomial Naïve Bayes Classifier using Sci-kit Learn & LSTMs based networks using Keras to compare performance in classification task with 30+ categories
- Achieved an accuracy score of 0.963 on the test set through a Logistic Regression model built on top of tf-idf Vectorizer
- Developed user interface for the toolkit using HTML5, CSS and JavaScript, and integrated it with backend using Eel

### IIM AHMEDABAD, Machine Learning Intern

May 2019 - Jul 2019    IIM Ahmedabad, India

- Implemented graph based topic modeling algorithm to extract 'Finance' related articles from given set of news articles

## POSITION OF RESPONSIBILITY

### BUSINESS CLUB, Head Analytics

July 2020 - Present    IIT Kharagpur, India

- Speaker at knowledge sessions on machine learning algorithms such as Logistic & Linear Regression, Decision Trees, Clustering etc
- Organized 1st International Edition of Indian Case Challenge, Asia's largest Case Study Competition witnessing 1,700+ participants

## AWARDS & ACHIEVEMENTS

- Secured a Department Change to 'Computer Science and Engineering' with Institute Rank 12th among 1465 students in first year
- Awarded Prof. Sunil Kanti Memorial Award for highest score in 'English for Communication' in the institute

## TECHNICAL SKILLS

- **Areas of Interest:** NLP, Deep Learning, Computer Vision, Data Structures, Algorithms, Software Development
- **Languages:** C, C++, Python, JavaScript, SQL, Java
- **Libraries:** PyTorch, TensorFlow, Keras, Sci-kit Learn, Matplotlib, OpenCV, Numpy, Pandas, Django, Flask
- **Software Packages:** Git, Jupyter Notebook, Eclipse, VSCode, NetBeans, MS-Power Point, Tableau

## MAJOR PROJECTS

### Multi-tasking Framework for Emotional Analysis

Prof. Pawan Goyal

Spring 2021

- Implemented a multi-tasking ensemble framework to jointly learn emotional classification & intensity problems
- Leveraged the representations obtained from training 3 deep NNs (CNN, LSTM, GRU) to achieve 2.3% increase in accuracy

### HAVE: Social e-Commerce Platform

Prof. Samik Sural

Spring 2021

- Developed a Social eCommerce Platform to facilitate 'Team purchase' of E-Commerce products using Django, HTML-CSS and MySQL; offering 7 end-user functionalities

### THAT, Hearing Assistance & Transcription

Prof. Manjira Sinha

Autumn 2020

- Developed a WebApp using Flask & JavaScript for improving learning experience of people with hearing impairment

### Google-Audio Sensitivity Extension

Prof. Mainack Mandal

Spring 2020

- Worked on understanding user's privacy perceptions due to information overload in Google data dashboard
- Built a plugin using JavaScript to extract user's Google dashboard data without requiring the user to upload it

### GrowFast: Employee Management System

Prof. Sudip Misra

Spring 2020

- Developed an Employee-HR portal using Java, JavaFX & MySQL for managing HR activities efficiently
- Applied principles of Agile software development with a focus on flexible & quality development, and user satisfaction

## OTHER PROJECTS

- **Peer-to-Peer Chat Application** for multiple network users. Used TCP as underlying transport layer protocol and implemented select system call through socket programming
- **Decision Tree Classifier** using ID3 algorithm without off the shelf use. Performed reduced error post pruning to achieve 1.5% increase in accuracy on test set
- **Naive Bayes Classifier** - Coded Gaussian & Multinomial Naive Bayes algorithm from scratch. Applied Principal Component Analysis for feature extraction
- **tinyC Compiler** - Wrote a Lexical Analyser in Flex, Semantic Parser in Bison and Machine Independent Code Generator