Keshav Bansal

Third Year Undergraduate
Department of Computer Science and Engineering
Indian Institute of Technology, Kanpur

keshavb@iitk.ac.in
http://home.iitk.ac.in/ keshavb
keshav22bansal | keshav22bansal
+91-8130557347

Educational Qualifications

Year	Degree	Institution	CGPA/%
July'17 – Present	B.Tech, CSE	Indian Institute of Technology, Kanpur	10.0/10.0
2017	CBSE – XII	Ahlcon Public School, New Delhi	96.2%
2015	CBSE – X	Apeejay School, Noida	10.0/10.0

Honours & Awards

- 2017-2020 **Academic Excellence Award**, for meritorious performance, IIT Kanpur
- 2020 **A* grade in ten courses**, for exceptional performance
- 2018 **J.N. Kapur prize**, for the best second year student in Mathematics Courses, IIT Kanpur
- 2017 **All India Rank 782**, JEE Advanced
- 2017 **All India Rank 59**, JEE Main
- 2017 **All India Rank 440**, KVPY Scholarship

Projects

Code Mixed Sentiment Analysis `keshav22bansal/BAKSA_IITK`
Prof. Ashutosh Modi Jan 2020 - July 2020

- Participated in Task 9 of SemEval-2020 shared task for sentiment analysis in bilingual code-mixed tweets.
- Used self-attention mechanism to bolster the performance of prevalent CNN architecture by creating an ensemble.
- Utilized multilingual XLM-Roberta Language Model for sub-word embeddings.
- Ranked 5^{th} out of 62 teams for Hindi-English code-mixed tweets.

Log Analyser app `SnehalRaj/LogAnalyser`
Nutanix Cloud Init.io Hackathon March 2019

- Developed a web app to handle log messages generated by microservices distributed across multiple hosts.
- Included features like live debugging, searchable exception patterns, and statistical graphs.
- Declared the winning submission.

Dcipher `keshav22bansal/Dcipher.hs`
Course Project March 2019

- Developed system for automatic solution of substitution ciphers in Haskell.
- Operating on N-gram model of English characters and stochastic local search over the space of 10^{26} possible keys.

SATisPy SAT Solver `keshav22bansal/SATisPy`
Course Project Oct' 2018

- Implemented a SAT solver to solve satisfiability problems encoded in propositional logic.
- Used Heuristics such as Unit Propagation and Pure Literal Elimination to decrease the running time.
- Created a program to encode a general SUDOKU puzzle and solved it using this SAT solver.

Work Experience

Praktice.ai *Bengaluru, India*
Data Science Intern May 2019 - July 2019

- Emulated Google's suggested clip feature for answering medical queries using named entity recognition, and TF-IDF weighted word2vec model vectors.
- Enhanced user's experience by creating a lexicon of complex medical terminologies encountered during conversation with the praktice chatbot using Google search APIs and web scraping.
- Analyzed medical data, and came up with an algorithm to suggest ailments given a set of symptoms.

Summer of Code *Kanpur, India*
Web Development Intern May 2018 - July 2018

- Developed Web and Android application allowing users to donate excess food to nearby food charities.
- Technologies used - PHP, SQL Server database, Google distance matrix API, Geolocation API, Send Grid API, Microsoft Azure Cloud.
- Awarded the second runner up title.

Positions of Responsibility

Project Mentor *IIT Kanpur*
Association of Computing Activities *2020*

- Conducted lectures on Probabilistic Machine Learning for 15 first year undergraduate students.

Company Coordinator *at Student's Placement Office, IIT Kanpur, 2018-2019*

Skills

Programming Languages: Python, C++, C, Haskell, Bash
Libraries: PyTorch, Tensorflow, Keras, NLTK, Scikit-learn
Web: React, JavaScript, PHP, HTML, CSS
Utilities: Shell Utilities, Git, MongoDB, LaTeX, Vim

Relevant Courses

Natural Language Processing (*i*)	Introduction to Machine Learning	Advanced Algorithms	Computer Networks (*i*)
Modern Cryptology (*i*)	Compiler Design (*i*)	Data Structures and Algorithms	Computer Graphics
Computer Organization	Discrete Mathematics	Probability & Statistics	Mathematical Logic (A∗)
Computing Lab - 1	Computing Lab - 2	Compiler Design	Numerical Methods (A∗)
Introduction to Programming (A∗)	Linear Algebra (A∗)	Theory of Computation	Real Analysis (A∗)

A∗: Grade for exceptional performance, *i*: In progress