# KISHAN VED

Junior Undergraduate
Discipline of Computer Science and Engineering
Indian Institute of Technology Gandhinagar

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EDUCATION			
B.Tech	Computer Science and Engineering, IIT Gandhinagar	2022-26	CGPA: 9.71
Class XII	Prakash College, Mumbai	2022	85%
Class X	Thakur International School, Mumbai	2020	97.8%

### **INTERNSHIPS**

Google Summer of Code , NumFOCUS

(May 2024 - Present)

Software Developer

- Developed and optimized <u>PyDataStructs</u>' C++ backend, integrating advanced tree data structures like AVL Trees, Red Black Trees, Splay Trees and Cartesian Trees. Added over 4000 lines of code
- Achieved an 8-10x increase in execution speed for high-performance computing tasks
- o Technology used: C++, Python, Python-C API, Git, GitHub. Contributions Link

### **OPEN SOURCE**

- LFortran (LLVM based Fortran Compiler) | 10 Merged PRs | Contributions Link
  - o Implemented Fortran intrinsic functions in C++ backend with comprehensive tests
  - Collaborated with the development team to resolve issues in string slicing, data type handling, and addressed emitted warnings, resulting in achievement of project milestones and 3 releases
- LPython (Ahead-of-time Python Compiler) | 5 Merged PRs | Contributions Link
  - Programmed advanced functions in the NumPy module, developed 3 string APIs and enhanced version control, guaranteeing perfect CI checks on GitHub. Contributed to overall development

# **PROJECTS**

• Text Generator (Machine Learning Project) | Streamlit App | GitHub

Engineered a predictive model for generating text based on the context of the previous 'k' characters by using a 3 layered neural network. Made using Python, PyTorch, Sklearn, Streamlit

Student Resume Generator Website | Website | GitHub

Designed and deployed an innovative website for generating resumes in LaTeX, which assisted over 1000 IITGN students in producing high-quality resumes. Technology used: HTML, CSS, JavaScript, GitHub

Image Super Resolution and Reconstruction using Machine Learning | GitHub

Leveraged advanced ML techniques like Matrix Factorization and Random Fourier Features to enhance resolution and reconstruct images. Utilized Python and relevant libraries

#### **SKILLS**

- C, C++, Python, Java, HTML, CSS, JavaScript, Android Development
- Ubuntu (Linux), Git, GitHub, MATLAB, PyTorch, Tensorflow, Numpy, Pandas, NodeJS, React

## **COURSES**

- CS: Machine Learning (11/10), Data Science (10/10), Data Structures and Algorithms (10/10)
- Mathematics: Probability, Statistics and Data Visualization (10/10), Numerical Methods (11/10), Linear Algebra and Single Variable Calculus (10/10), Differential Equations (10/10), Discrete Mathematics (9/10)

## **ACHIEVEMENTS**

- Accomplished Specialist level on Codeforces, earning a maximum rating of 1524. Codeforces Link
- Achieved 2nd rank in CPI for IIT Gandhinagar's 2022-26 batch, showcasing academic excellence
- Designated as a Reliance Foundation Undergraduate Scholar (received by top 2000 applicants)
- Attained an elite position with All India rank 1348 in IIT-JEE, being in the top 0.01% students
- Solved 220+ DSA questions on LeetCode, among the top 15.2% users with a contest rating: 1668. <u>LeetCode</u>

## **POSITION OF RESPONSIBILITY**

• Class Representative, Computer Science and Engineering (Aug 2024 - Present)
Elected as the class representative among a batch of 70 students. Led class activities, represented student interests and facilitated communication between faculty and students