Vaibhav Chandra

B.Tech - Computer Science and Engineering

Indian Institute Of Technology Indore

My Portfolio page ⬚

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology Indore	8.89	2019-2023
Senior Secondary	CBSE Board	90.6%	2019
Secondary	ICSE Board	90.83%	2017

EXPERIENCE

- **Arcesium** *May 2022 - July 2022*
  Software Developer Intern Hyderabad
  – Developed a key algorithm for validation of SWIFT messages using backtracking algorithmic paradigm
  – Implemented the algorithm in modular fashion using the principles of OOPS using **JAVA** and **Spring**
  – Integrated database to avoid using server side memory for static data using **PostgreSQL** and incorporated caching
  – Exposed the algorithm through an API to be used by other teams and wrote the documentation

PROJECTS

- **My Movies** *March 2021 - April 2021*
  Tech Stack: *HTML, CSS, JavaScript, ExpressJS, PassportJS* Github ⬚ Webapp ⬚
  – Developed the backend as well as database of the web app using **NodeJS** and **MongoDB**
  – Implemented username-password mechanism as well as Google **OAuth** for easier authentication
  – Included functionalities such as searching for movies, watching trailers, adding reviews, marking favourites

- **Library Management System** *February 2021 - March 2021*
  Tech Stack: *HTML, CSS, JavaScript, SQL, BootStrap* Github ⬚ Webapp ⬚
  – Developed a multi-purpose webapp for library management using NodeJS and **jQuery**
  – Designed the Entity-Relation Diagram and implemented it using **MySQL**
  – Implemented various consumer services like searching books, placing hold, making friends, taking fines, etc.

- **Sarcasm Detection using Multi-modal approach (Bachelor Thesis Project)** *January 2022 - December 2022*
  Tech Stack: *Python, Keras, Tensorflow, Pandas, Numpy* Github ⬚
  – Developed an end-to-end pipeline for sarcasm detection for multi-modal data (text, video and audio data)
  – Used BERT features to feed into statistical machine learning methods as well as **Recurrent Neural Networks**
  – Explored data augmentation through backtranslation between english and french language
  – Explored additive, multipliicative and **cross-attention** modality combination techniques

- **Optimisation and Parallelization of Matrix Polynomial Computation** *November 2021 - December 2021*
  Tech Stack: *C++, OpenMP* Github ⬚
  – Optimized the algorithm to compute Matrix Polynomials using Linear Algebraic algorithms like Paterson Stockmeyer algorithm, Schur Decomposition, Schur - Parlett Recurrence and Sylvester Equation solver
  – Improved the Time Complexity and parallelized the algorithm using Multi-Threading to obtain a 4X speedup

TECHNICAL SKILLS

- **Languages and Development Tools**: C/C++, JavaScript, SQL, JAVA*, Python*,Git, Gradle*, VSCode, Intellij
- **Technologies Used**: NodeJS, ReactJS, MongoDB, MySQL, Firebase, jQuery, BootStrap, Spring*, MyBatis*, PostgreSQL*,TensorFlow, Keras, Pandas, Numpy, Scikit Learn*
- **Area of Interest**: Web Development, Data Structures and Algorithms, Deep Learning*, Natural Language Processing* ** Elementary proficiency*

POSITIONS OF RESPONSIBILITY

- **Lead Member**, Gymkhana Web Development Team, IIT Indore *Oct. 2020 - Oct. 2021*
  – Played major role in the development of the offical International Affairs website of IIT Indore using **ReactJS**
  – Optimized the culturals and sports website that reduced the load time by about **50%**

KEY COURSES TAKEN

- **Mathematics**: Linear Algebra, Basic Calculus, Discrete Maths
- **Computer Science Courses**: Data Structures and Algorithms, Database Management System, Software Engineering, Computer Networks, Operating Systems, Parallel Computing, Computational Intelligence