

PIYUSH RANE

SENIOR YEAR UNDERGRADUATE ♦ COMPUTER SCIENCE AND ENGINEERING

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EDUCATION

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	B.Tech	Indian Institute of Technology, Kanpur	7.9/10.0
2018	CBSE(12)	R.K.V.M. Higher Secondary School, Gwalior(MP)	90.6%
2016	CBSE(10)	Kendriya Vidyalaya No - 5, Gwalior(MP)	10.0/10.0

ACADEMIC AND OTHER ACHIEVEMENTS

- 2018 - **All India Rank 3738**, Joint Entrance Examination(Advanced) among 200,000 candidates
- 2018 - **All India Rank 5028**, Joint Entrance Examination(Mains) among 1.2 Million candidates
- 2018 - **Qualified Stage 1 KVPY**, Indian Institute Of Science Bengaluru, India
- 2017 - **Qualified both stage1 and stage 2 KVPY**, Indian Institute Of Science Bengaluru, India

PROJECTS AND EXPERIENCE

Summer Internship

24 May 2021 - 16 July 2021

Axis Bank

- Created a **single node kubernetes** cluster using **minikube** on local machine and deployed the **RASA chatbot**
- Created a **multi-node kubernetes** cluster using **Amazon EKS** on **AWS** and deployed the **RASA chatbot** on the cluster
- Understood the working of open source **RASA chatbot** and developed it for giving customized replies
- Customized the cluster for automatically scaling up or down the number of **pods** according to the load on the chatbot
- Technologies:- **docker, kubernetes, minikube, RASA open source, Docker hub, Github, helm, nginx**

Compiler

Course Project: CS335A

Course name - Compiler Design

- Collaborated in a team of five to **build a compiler** having features:- **Data types** - int, long, char, **1D Arrays** - int, char, **User defined types** - struct, **Single-level pointers**, **Conditional Statements** - If-Else, Switch-Case, break, continue, **Loops** - While, For, **Functions** - Recursion, **Standard I/O functions** - printf, scanf, **Simple Math functions** - fabs, sin, cos
- Source language - **C**, implementation language - **C++**, target language - **x86 Assembly (AT&T Syntax)**
- Other technologies:- **Lex, Yacc**

IITK Summer of Code (Full stack developer intern)

May 2019 - July 2019

Department of Computer Science and Engineering IIT Kanpur

github://PiyushRane/Touch-EPFM

- Collaborated in a team of five to **develop a web-app** that automated the manual feedback mechanism of employees
- App gave different roles to users, allowing **admin** to add or remove **employees/supervisors** from database, allowing **supervisors** to assign task, give feedback, allowing **employees** to see their tasks, completion status
- The technologies used were **JavaScript, HTML, CSS, JQuery, Bootstrap and Google Firebase**

Analyse database systems

Course Project: CS315A

Course name - Principles of database systems

github://PiyushRane/DBMS

- Analyzed different database systems using 4 queries and different size databases
- Database systems used:- **MongoDB, SQLite3, MariaDB**, Technologies:- **Python, bash, expect**

App Development

February 2019 - April 2019

Association for Computing Activities(ACA)

github://PiyushRane/Time-Table-App

- Learned some basic **Linux/Unix commands** through Bandit OverTheWire Wargames
- Learned **HTML, CSS and JavaScript** and built a **simple calculator** that performs basic Arithmetic operations
- Learned **introductory Android Studio** and built a **Time Table App** to effectively manage time using **JAVA**

2D regions Package

Course Project: CS253A

Software Development and operations

github://PiyushRane/2D-RegionsPackage

- Mastered and applied OOPS concepts to determine the position of a point relative to complex shapes
- Used Inheritance to allow for intersection, union and other operations between given shapes

TECHNICAL SKILLS

Programming Languages

C/C++, Python, HTML, CSS, Java Script,

Tools

Google Firebase, SQLite3, MongoDB, Github, Docker hub, \LaTeX , lex, yacc

RELEVANT COURSES

Data Structure and Algorithms

Software Development and Operations

Compiler Design

Operating Systems

Introduction to Mathematical Logic

Introduction to Machine Learning

Linear Algebra and Ordinary Differential Equation

Real Analysis and Multivariable Calculus

Fundamentals Of Computing

Computer Organisation

Principles of Database Systems

Theory of Computation

Discrete Mathematics

Introduction to Electronics

Python for Everybody, Coursera Specialisation,

University of Michigan (*Online*)

EXTRA-CURRICULAR

- **Junior executive** - Worked in the Junior executive team of **Techkriti Open School Championship** and was responsible for fair conduction of exam in city Gwalior(MP) for approximately 200 students and management
- **Dance club Secy** - Won Dance Trophy in Inter Hall cultural competition of IITK by performing in Group Dance