# Piyush Rane

SENIOR YEAR UNDERGRADUATE | COMPUTER SCIENCE AND ENGINEERING

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#### **FDUCATION**

#### **IIT KANPUR**

B.Tech. Computer Science July 2018-2022 (Expected) CPI: 7.9/10.0

#### R.K.V.M GWALIOR

12th Grade (CBSE) | 2018 Percentage: 90.6/100

#### K.V. NO - 5 GWALIOR

10th Grade (CBSE) | 2016 CGPA: 10/10

#### COURSEWORK

Data Structures and Algorithms Operating Systems Principles of Database Systems Compiler Design Fundamentals of Computing Software Development and Operations Computer Organisation Theory of Computation Introduction to Machine Learning Python for Everybody (\*) Discrete Mathematics \* Online Coursera specialisation

#### SKILLS

#### **Programming Languages**

C++ • C • Python • Javascript

HTML • CSS • bash

#### Other Technologies

Google Firebase • SQLite3 • MongoDB Github • Docker hub • LATEX • lex • yacc

#### EXTRA-CURRICULAR

#### JUNIOR EXECUTIVE

Worked in the Techkriti Open School Championship team and was responsible for fair conduction of exam for 200+ students

#### **AWARD - ART CONTEST**

Secured **Special mention** among 270 participants from 7 IITs in the Inter Institute Art Contest organised by IITB

#### **DANCE COMPETITION**

Secured First position in the IITK Inter-hall group dance competition

#### **ACHIEVEMENTS**

**2021** - Received Pre-placement offer for the role of analyst from Axis Bank 2018 - Qualified Stage 1 of KVPY, Indian Institute Of Science Bengaluru 2017 - Qualified both stages of KVPY, Indian Institute Of Science Bengaluru

#### **WORK EXPERIENCE**

#### **AXIS BANK**

May 2021 - July 2021

#### Summer Internship

- Created a single node kubernetes cluster locally using Minikube and a multi-node kubernetes cluster on AWS using Amazon EKS
- Deployed and customized the open source **RASA chatbot** on these clusters
- Enabled the cluster for automatically scaling up/down the number of pods
- Technologies: Docker, Kubernetes, Minikube, RASA, Github, helm, Nginx

#### **IITK SUMMER OF CODE**

Full stack developer intern

MAY 2019 - JULY 2019 ♠ Touch-EPFM

- Received intensive training in technologies used in Full-Stack development
- Collaborated in a team of five to develop an Employee Feedback Mechanism web-app that automated the manual feedback system of employees
- Implemented different functionalities for Admin, Supervisors & Employees
- Technologies: JS, HTML, CSS, JQuery, Bootstrap and Google Firebase

#### **PROJECTS**

#### C - COMPILER | Prof. Amey Karkare CS335A Course Project

JAN 2021 - APRIL 2021 CS335A-Compiler-Design

- Built a compiler for C by performing lexical, syntax and semantic analysis
- Produced abstract syntax tree in dot script and generated assembly code
- Used **3AC** as intermediate language to connect source & target language
- Implemented **Least-Recently Used** algorithm for register allocation
- Source C, Implementation C++, Target x86 Assembly (AT&T Syntax)

#### **DATABASE ANALYSIS** | PROF. ARNAB B. CS315A Course Project

JAN 2021 - APRIL 2021 Database Analysis

- Analyzed performance of database systems using various sized databases
- Measured the time taken by queries and represented them in graphs
- Database: MongoDB, SQLite3, MariaDB, Tech Stack: Python, bash, expect

## GEM OS | PROF. DEBADATTA M.

SEPT 2020 - DEC 2020

### CS330A Course Project

- Implemented OS elements such as Paging, File system & Message Queues
- Programmed various system calls such as open, read, write, dup2, lseek
- Implemented memory management operations like mmap, munmap and huge page creation

#### APP DEVELOPMENT

FEB 2019 - APRIL 2019

#### Association for Computing Activities(ACA)

- Learned Linux/Unix commands through Bandit OverTheWire Wargames
- Built a calculator in HTML, CSS, JS and a Time Table App in Android Studio