# Piyush Rane

SENIOR YEAR UNDERGRADUATE | COMPUTER SCIENCE AND ENGINEERING

### **EDUCATION**

#### **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

Fundamentals of Computing
Data Structures and Algorithms
Software Development and Operations
Principles of Database Systems
Operating Systems
Compiler Design
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

#### Tools

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

# EXTRA-CURRICULAR

#### JUNIOR EXECUTIVE

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

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

Secured **Special mention** by competing with other IITs in the **Inter Institute Art Contest** organised by IITB.

#### DANCE COMPETITION

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

#### WORK FXPERIENCE

#### **AXIS BANK**

Summer Internship

May 2021 – July 2021 Secured PPO

- 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

#### **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

### **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
- Source C, Implementation C++, Target x86 Assembly (AT&T Syntax)

# **DATABASE ANALYSIS** | PROF. ARNAB B. CS330A Course Project

JAN 2021 - APRIL 2021

O Database Analysis

- Analyzed database systems using 4 queries on various size databases
- Measured the **time taken** by gueries and represented them in **graphs**
- Database: MongoDB, SQLite3, MariaDB, Tech stack: Python, bash, expect

# **GEM OS** | PROF. DEBADATTA M. CS3154 Course Project

SEPT 2020 - DEC 2020

# CS315A Course Project

- Implemented OS elements such as Paging, File system & Message Queues
- Programmed various system calls such as open, read, write, dup2, Iseek
- 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**