

# Parimal Prasoon

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## EDUCATION

### VIT BHOPAL UNIVERSITY

B.TECH IN COMPUTER SCIENCE AND  
ENGINEERING

Expected May 2021

## WORK EXPERIENCE

### KWIKPIC | SOFTWARE ENGINEERING INTERN

Jan 2021 - Present

- Built **Django** middleware for restricting access to internal views.
- Implemented communication between microservices using **Redis**.
- Created Django **REST API** for Kwikpic Certification Program verification.
- Integrated feature to download images from Dropbox folders programmatically using Python.
- Built **Docker** container for Django, Unicorn and Nginx, deployed on **AWS ECS**.

## LINKS

GitHub:// [Parimal7](#)

LinkedIn:// [parimal7](#)

Codechef:// [parimal7](#)

HackerEarth:// [@parimal\\_7](#)

HackerRank:// [pairmal7](#)

## COURSEWORK

- Data Structures and Algorithms
- Operating Systems
- Artificial Intelligence
- Computer Networks
- Database Management Systems
- Design and Analysis of Algorithms

## SKILLS AND INTERESTS

### Programming Languages

C • C++ • Python • Java • JavaScript

### Tools

Emacs • CMake •  $\LaTeX$  • Git • Docker

### Frameworks

Django • SFML

### Databases

Redis • SQLite • PostgreSQL • MySQL

### Cloud Services

Heroku • AWS

## TECHNICAL PROJECTS

### RAW IMAGE PROCESSOR | DIGITAL IMAGE PROCESSING | GITHUB LINK

- Built a **C++** application which converts RAW file format generated by digital cameras into a bitmap file.
- Implemented linear interpolation for debayering the RGB image.
- Added dynamic linking to reduce executable file size.
- Created a **CMake** script to build the full project.

### CHESS BOT | ARTIFICIAL INTELLIGENCE | GITHUB LINK

- Built a chess playing bot in **JavaScript**. Used libraries chess.js for move generation and chessboard.js for board visualization.
- Implemented mini-max algorithm for decision making, searching up to a depth level of three.
- Optimized the algorithm using alpha-beta pruning.

### PORTFOLIO WEBSITE | WEB DEVELOPMENT | WEBSITE LINK

- Created a portfolio / blog web application from scratch using the **Django** framework.
- Integrated markdown editor for better text editing and rendering through Django admin.
- Deployed the site on **Heroku**.

### SQLITE-CLONE | DATABASES | GITHUB LINK

- Programmed a database from scratch in **C** programming language.
- Added persistence to disk and cursor abstraction for tracking rows.
- Implemented B+ tree from scratch for efficient insertion and searching.

### PATHFINDING VISUALIZER | ALGORITHMS | GITHUB LINK

- Created a desktop application to find shortest path from source to destination in a given map.
- Implemented Dijkstra's and A\* algorithms from scratch for pathfinding using **C++**.
- Built the graphical user interface using **SFML**.

### WEB SERVER | COMPUTER NETWORKS | GITHUB LINK

- Implemented a simple web server in **Python** that can handle concurrent connection requests.
- Added Python Web Server Gateway Interface support.
- Solved the problem of zombie processes by implementing a signal handler and wait system call.

## PROGRAMMING COMPETITIONS

2020	19 <sup>th</sup> /630	Data Structures and Algorithms, HackerEarth
2019	543 <sup>th</sup> /20,000+	Codechef August Long Challenge, 2019
2019	223 <sup>th</sup> /6,000+	Codechef May Long Challenge, 2019