

BHASKAR JOSHI

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Education

International Institute Of Information Technology, Hyderabad

Hyderabad, India

*B.Tech Hons. in Computer Science + MS by Research : **CGPA 9.18***

Aug. 2019 – Current

Undergraduate Researcher at Robotics Research Center (RRC)

Nirmala Convent Sr. Sec School, Nainital

Uttarakhand, India

*Intermediate : **96.2%***

2012 – 2018

*High School : **CGPA 10***

Experience

Cossine Labs

Jan 2021 – Apr 2021

Backend Developer

Hyderabad, Telengana

- Designed and developed the first version of a **mobile application** ShoutOut (Instagram-like), that allows users to create and share posts anonymously using **Flask** (for backend framework) , **Firestore** (for database) and **Amazon Comprehend** (for NLP) .
- Implemented features such as user registration, login, OTP verification, post creation, comments, likes, user rating, chat, and content moderation.

Projects

GrabCut | *Python*

October 2021

- Interactive Foreground Extraction using GrabCut Algorithm for foreground extraction with minimal user interaction.
- Worked in a team of 4 and experimented with algorithm for clear separation of foreground and background.

Computer Vision based Jigsaw Puzzle Solver | *Python, PyTorch, Numpy*

February 2022

- Implemented a self-supervision approach that relies on jigsaw like puzzles as the pretext task in order to learn image representations.
- Tested the model on ImageNet and Mnist image datasets and made detailed analysis study.

Raft | *Go Lang*

March 2022

- Implemented Raft, a replicated state machine protocol containing Raft leader election and heartbeats , log (the leader and follower code to append new log entries).

C-Shell | *C, OS System Calls*

October 2020

- A bash-like command interpreter, written in C, with support for process management, piping and redirection and built-in as well as system commands.

Image Segmentation and SLAM/SfM Algorithms | *Python, OpenCV, Open3D*

Sept 2021

- Implementation and analysis of algorithms used in SLAM and SfM pipelines, such as 2D Euclidean Pose Graph Optimization, DLT, ICP, and PnP.

Coursework and Technical Skills

Courses: Data Structures and Algorithms, Operating Systems, Distributed Systems, Design and Analysis of Software Systems, Data and Application, Computer Vision, Statistical Methods in AI, Machine Data and Learning, Mobile Robotics, Robotics: Dynamics and Control, Introduction to UAV, Algorithm Analysis & Design, Linear Algebra and Probability

Languages: C/C++, Python, Go, HTML/CSS, JavaScript, Shell Scripting, ROS

Framework and Database: Flask, MongoDB, MySQL, Firestore

Technologies/Frameworks: Linux, Git, Docker

Activities and Awards

- In **Merit List** for excellent performance in **Monsoon** and **Spring** 2020-21
- One of the few to be selected for **Amazon ML Summer School 2022**.
- Teaching Assistant** for **Machine, Data and Learning** in Spring 21-22 responsible for teaching 300+ students
- Tester** for **Codeforces Rounds** 676, 682, 699 and Global Round 11 participated by 15K+ people worldwide.
- Within the top 700 ranks worldwide in **Google Kickstart** and qualified for **Codejam, Hackercup**.
- Active member of **Programming Club, Alumni Cell, ArtSociety, Gaming Club** and **student mentor**.