

Abhishek Shree

SOPHOMORE UNDERGRADUATE · ECONOMICS

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Education

Indian Institute of Technology Kanpur

B.S. IN ECONOMICS - 8.8/10

Kanpur, India

Nov. 2020 - Present

Loyola High School

CLASS XII CBSE BOARD - 95.2%

Patna, Bihar

2018 - 2020

Loyola High School

CLASS X CBSE BOARD - 98%

Patna, Bihar

2008 - 2018

Projects

IITK Coin - Frontend

🔗 [iitk-coin-native-app](#)

WITH BHUVAN SINGLA (Y18), HARSHIT RAJ AND SOMYA GUPTAA | SNT COUNCIL PROJECT

September 2021 - December 2021

- Developing the frontend application (in **React Native**) for IITK Coin to be used in IITK campus.
- Implemented custom **UI** components keeping in mind a smooth user experience.
- Involved **connecting APIs** through axios and saving tokens in **secure-store**. Maintained several states and navigation between screens.
- Also responsible for **integrating** and **testing** the backend APIs with the app for a smooth user experience.

IITK Coin - Backend

🔗 [iitk-coin](#)

MENTOR: BHUVAN SINGLA (Y18) | SEMESTER PROJECT, PROGRAMMING CLUB

May 2021 - July 2021

- Developed a **centralised pseudo-coin system** in **GoLang** for use in IITK Campus.
- Involved Database Management, Password **Authentication** with Hashing and Salting and **User Session Validation** with JSON Web Tokens (**JWTs**).
- Built robust REST APIs with **multi-level user permissions**.
- Various techniques such as **concurrency** and **deadlock prevention** were implemented to keep transactions safe and quick and maintain **ACID** properties.

Numbers Made Dumber

🔗 [Numbers-Made-Dumber](#)

MENTOR: YATHARTH GOSWAMI, ROHAN BAIJAL, VIVEK KUMAR SINGH | SEMESTER PROJECT, STAMATICS

April 2021 - July 2021

- Worked on understanding algorithms like **Euclid's Algorithm** and it's immediate consequence like **Bezout's Identity**, Linear Diophantine Equations, etc.
- Worked on primes like **Fermat** and **Mersenne** Primes, primality tests like **Lucas-Lehmer** Test, **Miller-Rabin** Test and other ideas involving primes.
- Explored the concepts of **Linear and Non-linear congruence**, Chinese Remainder Theorem, and its applications.
- Explored the ideas involved in **cryptography**, including **group theory**. Implemented the **RSA** Encryption Algorithm as an exercise in **Haskell**.

Full Stack Web Development

🔗 [ACA-FSWD](#)

SEMESTER PROJECT, ASSOCIATION OF COMPUTING ACTIVITIES, CSE, IITK

April 2021 - June 2021

- Learnt about HTML-5, CSS, JavaScript(ES6), Async Functions, Promises, React, MongoDB, server-side NodeJS, HTTP Requests & Headers etc.
- Implemented a front-end to connect APIs of a mock server using asynchronous JavaScript & error handling.
- Learnt React, server-side NodeJS and MongoDB and developed a basic web app.

Gnix

🔗 [gnix](#)

SELF PROJECT

May 2021

- Implemented some basic UNIX Commands like ls, pwd, cat, touch, sleep, whoami, grep (basic search) in golang.
- Understood the importance of Makefiles and used it to automate the build process.

Handpose Emote Detection

🔗 [handpose-emote-detection](#)

SELF PROJECT

March 2021

- Developed a react application which utilized React Webcam to detect hand gestures namely, thumbs up and peace sign.
- Read and understood how to mediapipe handpose model works and used it with tensorflow.js.

Android Chat Application

🔗 [Android-Project](#)

SELF PROJECT

January 2021

- Developed a chat application for android (in Java).
- Applied the ideas of Android UI development including different types of views and their life-cycle.
- Used firebase auth, storage and database for the backend and integrated them with the application.

Technical Skills

Programming	C/C++, Golang, Bash, Javascript, Typescript, Python, Haskell, Java
Development	Flask, Fiber (Go), Django, Jekyll, Next.js, React, React Native, Redux, HTML5, SASS
ML Tools	PyTorch, Keras, Tensorflow, Scikit-learn
Utilities	Docker, AWS, Heroku, PostgreSQL, SQLite, MongoDB, Firebase, Insomnia, Selenium, Vim, \LaTeX
OS	Manjaro, Ubuntu 20.04 (i3wm), Windows, WSL
Robotics	ROS Noetic, Gazebo

Relevant Courses

Mathematical Economics ⁱ	Macroeconomics I ⁱ	Probability and Statistics ⁱ
Introduction to Electronics	Introduction To Game Theory And Mechanism Design ^p	Microeconomics I
Fundamentals of Computing	Linear Algebra & ODEs	Real Analysis
Deep Learning Specialization ^o	TensorFlow Developer ^o	GAN Specialization ^o
Applied Cryptography ^{o,i}		
<i>i: In progress</i>	<i>o: Online Course</i>	<i>p: PG Course</i>

Positions of Responsibility

Team Member

AUV, IIT KANPUR

India

April 2021 - PRESENT

- Worked on improving the [team website](#), which **ranked 3rd in Robosub, 2021**.
- Implemented **Kalman filters** based **localisation** technique to solve the mapping problem, integrated the algorithm with **ROS** to work with real world sensor data.
- Currently working in the software subsystem, on implementing robot mapping using probabilistic techniques like **FastSLAM**, **RatSLAM**, and **BioSLAM**.

Secretary

PROGRAMMING CLUB, IIT KANPUR

India

Sept 2021 - PRESENT

- Among the 25 selected secretaries responsible for various activities of the club.
- Writing a multi-part blog series aimed as an explainer about the various low-level components of a Linux Distribution (Linux Demystified).

Student Guide

COUNSELLING SERVICE

India

Oct 2021 - PRESENT

- Selected to assist a group of 6 freshmen academically and emotionally, to get acclimatized with the new college environment.

Miscellaneous

- Among the top 25 teams(among 500+) in [MIT's BattleCode 2020 Scrimmaging Rounds](#).
- Among the top 3% students in the country, JEE Advanced 2020.
- Among the top 0.2% students in the country, JEE Main 2020.
- Among the top 10% programmers on Hackerearth in 2017.
- Maintain a personal web page and blog at [shreee.me](#)