

Suhas Shankar

suhass@iitk.ac.in

EDUCATION

IIT KANPUR

BTECH IN COMPUTER SCIENCE

July 2023 | Kanpur

Cum. CPI: 9.8 / 10.0

LINKS

Github - <https://github.com/agent-q1>

Website - <https://agent-q1.github.io>

COURSEWORK

UNDERGRADUATE

Fundamentals of Computing (ESC101)

Real Analysis (MTH101)

Game Theory and Mechanism Design (CS711)

Data Structures and Algorithms (ESO207)

SKILLS

PROGRAMMING

Languages

C • Java • JavaScript • Javascript

Frameworks

React • Nodejs • CSS • MongoDB •

Elastic Stack

Cloud

Docker • Kubernetes • AWS

POSITIONS

ACADEMIC MENTOR

MTH101 and MTH102

Real Analysis • Vector Calculus • Linear

Algebra • Differential Calculus

STUDENT GUIDE

Mentoring a group of freshers

GAME DEVELOPMENT SOCIETY

SECRETARY

March 2020 - Present

MUSIC CLUB

SECRETARY

May 2020 - Present

EXPERIENCE

TERASOLOGY | CONTRIBUTOR

Sep 2019 - Present

- Assistant Mentored a **GSOC** project that dealt with optimizations to world generation in game.
- Set up logging and metric monitoring solution for the game on the cloud.
- Numerous Bug Fixes to the Pathfinding module of the game
- Created a **TutorialPathfinding** repository for the game, with detailed documentation and tutorial examples.

KEY PROJECTS¹

AUTOGRADING ANSWER SCRIPTS | AT PROJECT

July 2019 – Dec 2019 | IITK

Project under **Prof Piyush Rai** to push for building a solution to autograde answer scripts of quizzes.

- Used **OpenCV** to center and preprocess the images using techniques such as canny edge detection.
- Used **TensorFlow** to train ML models to recognise patterns in handwriting.
- Used **MERN** stack web application to serve as the interface to allow professors to upload question papers and answer keys

AI DEBATER | GAME-THEORY AND AI PROJECT

Oct 2020 – Present | IITK

Project under **Prof Swaprava Nath** to build a debater using NLP and Game Theory concepts of finding a Sub-game Perfect Nash Equilibrium (SPNE) in a PIEFG to predict the next move which maximises utility.

- Used **Neo4j** as the graphing database to construct the argumentation framework and to find shortest paths.
- Used **BERT** and **AllenNLP** to find relationships between texts of legal data.
- Used **Flask** and **Gupshup** to act as the interface for the bot.

TSOC | TERASOLOGY SUMMER OF CODE

May 2020 - August 2020

- Built a path-finding test bed to analyse various hierarchies within **Hierarchical Path-finding**.
- Implemented Bresenham's algorithm for highlighting paths
- Setup **Elastic Stack** on a **Kubernetes** Engine to stream logs from game instances to the elasticsearch database.
- Setup **nginx** as **ingress controller**, **reverse proxy** as well as **load balancer**.
- Setup automatic **SSL** certificate management using cert-manager.

IITKBUCKS | PCLUB SUMMER PROJECT

May 2020 - July 2020

- Built a **Block-Chain** based cryptocurrency network
- Achieved concurrency of mining blocks as well as making transactions using **workers** in nodejs

ACHIEVEMENTS

2019 **AIR 246** KVPY Fellow (Among 100,000 participants)

2019 **Winner** Black Box - Fresher's Programming Contest

2020 **CPI 10.0** Academic Excellence Award IIT Kanpur