Suhas Shankar

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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 PROJECTS[1]

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. The paper can be found *here*

- 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	**Percentile - 99.93**	JEE Mains (Among 1,000,000 participants)
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

PROJECT TITLES ARE CLICKABLE