# Hrsh Venket

#### ASHOKA UNIVERSITY - COMPUTER SCIENCE MAJOR

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#### **EDUCATION**

## BSc Computer Science second year student (Pursuing)

Ashoka University (2021–Present)

- Data Structures A; Probability and Statistics A; Intro to Machine Learning A

#### A Levels

APL Global School, Chennai (2017–2021)

- AAAA (Physics, Mathematics, Economics, Classicial Studies)

#### TECHNICAL SKILLS

Programming Languages Python3, ,C/C++,

Tools: LATEX, Git, GDScript (Godot), Docker, Excel

Languages: Fluent in English. Conversational Fluency in Tamil, Hindi, and German

#### EXPERIENCE

#### Mphasis Lab

Research Assistant

Ashoka University (August 10 2023 - Present)

- Remote sensing work with Professor Meghna Agarwala to build a forest fire classifier using LANDSAT time series data. currently working on training an LSTM
- Worked with Google Earth Engine Python API, and currently working on a literature review

#### Intro to Machine Learning

Teaching Assistant

Ashoka University (Monsoon 2023 semester)

- Worked on Grading of Assignments and writing marking schemes for 80+ Students
- Took 25+ hours of Office Hours and worked on assessing 30+ Projects

#### Ashoka University

Research Assistant

Ashoka University ((January 2023 - August 2023))

- I worked with a Phd Student from AP Lab (Bio) and Professor Raghavendra Singha (CS)
- Used OpenCV to measure measure intestinal deformations in microscopic roundworm C.elegans via 3D reconstruction

## Projects

Click here for more detailed writeups on my completed projects

#### 3D reconstruction of C. elegans

Ashoka University

- Made a pipeline for automated 3D reconstruction of planar z stack of fluorescent Spinning Disk Confocal microscope(SDCM) images

#### 3D Reconstruction using ML

Ashoka University (January 2024 - May 2024)

- Replicated results of the MiDaS and tried to replicate the results of the Depth Anything paper
- Used Femto Bolt ToF depth sensor and compared noise profile with our version of the MiDaS model

#### **Load Forecasting Bounty**

Ashoka University (January 2024 - May 2024)

- Scored 24th/195 teams in **this** Load Forecasting ML bounty to do electricity loadforecasting using XGBoost
- Learnt how to interface with weather APIs and encode complex information

#### Basic Hawkeye System

Ashoka University (November 2023 - December 2023)

- Implemented a ball tracking and 3D reconstruction pipeline using YoloV8 and openCV with projective geometry

#### MCTS in C

Ashoka University (November 2022 - December 2022)

- Implemented Monte Carlo Tree Search, a Reinforcement Learning algorithm, in C to play Mega Tic Tac Toe.

## The Merchant of Mareechikoor (Video Game) Ashoka University (November 2023 - December 2023)

- Build a management (like Papers Please) style video game with the Godot Engine, implementing a drag and drop system, did basic 2D animations and interfaced with dialogue manager

### President of Eeshto (Board Gaming Society)

Ashoka University, (February 2023 - January 2024)

- Managed a team of 50 across 6 departments
- Won award for outstanding contributions to campus life
- Expanded Eeshto into 3 verticals, introducing a Video Games team and wrote Club Charter, doubling the size of the club
- Oversaw 20 + campus events

## School Pupil Leader (/Head Boy /School Captain)

APL Global School, Chennai (2020 - 2021)

- Built a secure server for Primary school students to interact with each other outside of school hours, while allowing teachers to moderate discussion.
- Managed a team of 20 students from grades 6 to 12 who made up the student government

### Secretary General

APL Global School, Chennai (2020 - 2021)

- Organised the school's first fully student driven, first online MUN
- Oversaw 100 delegates over 3 committees
- Managed expenses and conducted the first profitable MUN of the school

#### Miscellaneous

- Trained 4 years in Krav Maga
- 20 MUNs as Delegate, 5 MUNs in Organising Comittee
- Member of College Volleyball A-team (Main Setter)