Samarth Bansal 200070073
Electrical Engineering **B.Tech.**
Indian Institute of Technology Bombay **Gender: Male**
DOB: 04/05/2003

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 142** in JEE Advanced 2020 amongst **1.5 lac** candidates *(2020)*
- Secured a position in the **top 45 ranks** in the **INJSO** and was invited to the **orientation-cum-selection-camp** *(2018)*
- Awarded the prestigious **Kishore Vaigyanic Protsahan Yojana** fellowship with an **All India Rank 118** *(2019)*

PROFESSIONAL EXPERIENCE

Amazon Inc. | IN Fresh Division | *Software Development Intern* [May'23-Jul'23]

*Awarded an **Letter of Recommendation** for exemplary performance & swift learning ability*

- Engineered polygons function using MAPPLS to mark farm location & boundaries on Amazon Kisan (**10th** global Amazon app)
- Identified 5+ major bugs in the live-version reducing app crashes by **28%** and authentication speed enhancement by **15%**
- Built a notification dashboard and APIs to **customize receivers list** and send notifications with placeholders using Pushy
- Adapted **Paginated API system** for DynamoDB to preview filtered data reducing the data payload of an API by **4 times**

IStreamo Galaxy Pvt. Ltd. | WowTalent | *Software Development Intern* [Nov'21-Jan'22]

- Developed a compact plugin using **FFMPEG library** to add an outro and watermark on the video to enable external sharing
- Researched on algorithms and markers used by **5+** social media giants to generate feed for **1000+ new users** with ZERO info
- Designed an algorithm to generate a general ranking of uploaded content using 10+ markers based on topics and interest

KEY PROJECTS

HMI Systems | *Prof. Siddharth Tallur* | *Course Project* [Jan'23-Apr'23]

- Prototyped an HMI systems **using C** and **ILI9341 library** on the Raspberry Pi Pico to monitor and control equipment at WEL
- Programmed microcontroller to **convert colored images into RGB 565** and load the LCD buffer in reverse order to display
- Enabled HMI system to communicate with Host using bluetooth to read and modify data on the SD-card using **SPI protocol**
- Designed a PCB and a compact casing using **Fusion360** for a portable packaged device with intuitive buttons and **5+ screens**

Human Visual Balance | *Prof. Prasad Bokil* | Summer Undergraduate Research P*roject* [May'21-Jul'21]

- Programmed 3 2-dimensional multiplayer games on the **Unity Platform** to quantize the Human cognitive visual balance
- Presented the collected data of **100+ person** to study 5+ parameters that affect the Human Visual Balance to design UI

Nucleus Watershed segmentation | *Prof. Amit Sethi* | *Course Project* [Autumn 2022]

- Implemented a basic **U-net architecture** for semantic segmentation of binary nucleus vs non-nucleus cell in TF and Keras
- Used **Watershed segmentation** techniques on probability map produced by the U-net model to separate individual nuclei

Automated Custom Messaging | *Self Project* [Jan'23-Apr'23]

- Automated the WhatsApp messaging using **Selenium** and **Pandas** library to send customized images and text **16% faster**
- Offered as an option in the institute general elections which saved **200+ hours** and reduced accounts blocking by **40%**

POSITIONS OF RESPONSIBILITY

Project Mentor | MyBox | *Summer of Code* [May'23-Jul'23]

Summer event organised by Web n' Coding Club to complete your tech ideas

- Modelled an audio-streaming app **allowing multiple devices** to control a bluetooth speaker and playlist using Flutter
- Instructed **5 sophomores** to build their **first Android app** using firebase database and audio library with login authentication

Film Overall Coordinator | Punarvarti | *Performing Arts Festival* [Feb'23-Aprl'23]

The greatest cultural event of IITB with history of 40+ years

- Headed the Film department of PAF-1 **representing 6 hostels**, consisting 25+ students to aid the visuals of 90+ mins drama
- Conceptualized, authored and directed a 5-minute long trailer video and 10-minute **animated intro for the first time** in PAF

EXTRA-CURRICULARS

Debate	- Awarded **1st rank at National Level** Debate competition organised by Gyanlab kidovator, Bangalore - Received **1st rank at District level** Inter-school competition among 250+ participants and 8+ Schools
Cultural	- Scripted, directed & edited an 8-minute video casting six people who **won 1st prize in Music Video GC** - Won **3rd prize in Dramatics GC** by directing and scripting the 26-minute drama for a team of 14
Sports	- Completed a 80+ hour year-long training for **Weightlifting Cadet at NSO**, IIT Bombay in the 1st year