

# Ayush Pande

Computer Science & Engineering  
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## Research Interests

Interactive 3D segmentation, multimodal learning, neural rendering, human-AI interaction.

## Publications

- [1] **Ayush, Pande** and Gaurav Sharma. “ViSt3D: Video Stylization with 3D CNN”. In: *Advances in Neural Information Processing Systems* 36 (2024). URL: <https://neurips.cc/virtual/2023/poster/72962>.
- [2] **Ayush, Pande**. “Click-to-Segment: Real-Time 3D Object Segmentation in Neural Scene Representations”. In: *Under Preparation* ().

## EDUCATION

Year	Degree	Institute	CPI/%
2022-Present	PhD	Indian Institute of Technology,Kanpur	9.0/10
2020-2024	MS by Research	Indian Institute of Technology,Kanpur	9.0/10
2015-2019	B.E./(Computer Engg.)	Rajiv Gandhi Proudyogiki Vishwavidyalaya	7.56/10
2013-2014	CBSE(12 <sup>th</sup> )	Advanced Academy,Indore(M.P.)	89.8%
2011-2012	CBSE(10 <sup>th</sup> )	Advanced Academy,Indore(M.P.)	9/10

## Awards and Achievements

1. Selected as a Reviewer for **NeurIPS 2025**—one of the premier international conferences in machine learning.
2. **All India Rank 261** in GATE CS 2020, total 97481 candidates appeared for the exam.
3. Secured 615th rank in Pre-Elimination round of SNACKDOWN 2017 in 21,038 teams from 103 countries.
4. Qualified in Google Code Jam for Round 1 in 2017 among 18,000 participants out of 64,000 participants.
5. Qualified in Google Code Jam for Round 1 in 2018 among 14,000 participants out of 62,000 participants.
6. Secured rank under 700 in TCS Codevita 2017 Round 1 from participation of 99,473 in August 2017.
7. Secured 1st position in CodeIt coding competition by LrNiz Software Solutions organized by CSI.
8. Competitive Programmer at Codechef with maximum 4 star rating.

## PROJECT

1. **Predicting the Drug Resistance in Mycobacterium tuberculosis** (CS690A) Guide : Prof. Hamim Zafar (Sep'20-Oct'20)

The conventional approach of culture based antimicrobial susceptibility testing requires very long time (weeks to months) to determine the resistance/susceptibility of a certain TB isolate. From whole genome sequences mutations are inferred and the mutations are used as features for classifying an isolate as susceptible or resistant.

- Predicting the resistance of 10 drugs for the given absence or presence of different 222 mutations of the test sample.
- Used xgboost,SVM etc and ANN's for predicting the resistance value of different drugs for a given sample. Handled missing values,class imbalance in the dataset.

2. **Study and analysis of the effect of Covid-19 lockdown on Air Quality in India** (CS685A)Guide: Prof. Arnab Bhattacharya (Sep'20-Dec'20)

- Analysis of the AQI levels and the corresponding prominent pollutants responsible for the AQI level across multiple cities about 22 for the year 2019.
- analyse the AQI levels prior, during and post lockdown in time periods of week, month and lockdown phase.

- Predict the AQI levels for the duration of the nationwide lockdown if the lockdown hadn't been enforced for a set of five cities by considering the AQI data available from the year 2016 to 2019.
- Applied different correlation tests like Kendall tau, Spearman and significance test name Wilcoxon signed rank test.

### 3. FACER(Undergraduate Project) Guide: Prof.Pratiksha Asati

(Jan'18-Apr'19)

- Extract an individual's images from directory containing multiple images whether the person is present in group of individuals or alone. Then, save those images in separate directory.
- Find Duplicate Images in a Directory containing numerous images.
- Implemented Real Time Face Recognition.

### Relevant Courses

1. Introduction to Machine Learning
2. Topics in Probabilistic Modeling and Inference
3. Computational Genomics
4. Data Mining

### Technical Skills

- Languages : C, C++, CUDA, JAVA, Python
- Data Analysis : Pandas, Numpy
- Frameworks : PyTorch, Tiny-cuda-nn
- IDE : Netbeans 8.1, PyCharm, Visual Studio Code

### EXTRA CURRICULARS

1. Secured first position in Badminton Tournament at Inter-IIT Sports Meet 2022.
2. Secured second position in Inter Collegiate Badminton Tournament of RGPV organised by SGSITS College.
3. Secured Second position in Interhouse Maths Quiz in class 10th in the school.