

Atharva Naik

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INTERESTS	Deep Learning, Natural Language Processing, specifically Neural Dialogue Models, Summarization, Sentiment Analysis, and Hate Speech Detection,	
EDUCATION	Indian Institute of Technology (IIT) Kharagpur Bachelor of Technology, BTech in Computer Science • Current CGPA: 9.67/10 (Department rank: 6/121)	West Bengal, India Expected Jul 2022
PROJECTS	Tracking Islamophobia in the Wake of COVID-19 Ongoing <ul style="list-style-type: none">• Aim: Detect and monitor hate speech against Indian Muslims on Twitter after Tablighi Jamaat pilgrims were linked to COVID-19 spread in India.• Tackling the problem of detecting hate speech targeting specific religions from Hindi-English code-mixed tweets.• Examining few shot learning techniques to adapt general code-mixed hate speech detection models to our task of identifying hate speech focused on specific targets. Emotion Detection from COVID-19 Tweets May 2020 - July 2020 <ul style="list-style-type: none">• Designed and implemented a transformer-based model, and an improved version of adversarial attention networks (AAN) for emotion regression.• Compared our model with LSTM and CNN baselines for fine grained emotion classification and observed performance comparable to SOTA on the AIT task from SemEval 2018 as well as COVID-specific data• Visualized trends in topics specific to a given emotion, using aspect extraction techniques to create topic representations.• Preprint available on arxiv Aspect Extraction for Tourist Review Summarization March 2020 - April 2020 <ul style="list-style-type: none">• Explored unsupervised extraction of aspects from tourist reviews using a neural Attention-Based Aspect Extraction (ABAE) model. Aspects were then used to build an opinion summarization system over reviews. Organ Donation Matcher March 2020 - May 2020 <ul style="list-style-type: none">• Built a website using Django and PostgreSQL, to match organ donors with recipients, create fundraisers, blog, comment and chat with users, for my software engineering course project Mahindra E2O Nov 2019 - Dec 2019 <ul style="list-style-type: none">• Python script for training Reinforcement Learning Agents in the CARLA simulator, with camera feed and PointCloud LIDAR data.• Worked on a jerk-optimal frenet-frame based planner frenet-frame based planner Eklavya-7.0 May 2019 - Jun 2019 <ul style="list-style-type: none">• Worked on Localization and Planning on EKLAVYA-7, the bot that achieved runner up performance in IGVC 2019. All work was done using the ROS kinetic framework. Image Processing and Path Planning Workshop Dec 2018 <ul style="list-style-type: none">• Week long IEEE certified workshop on image processing, that covered basic theory as well as programming in C++ with OpenCV• Implemented the A* algorithm for a 2D rectangular bot in an obstacle grid, with the stl library of C++• Implemented a vanilla Kalman Filter in python	
TECHNICAL SKILLS	<ul style="list-style-type: none">• Programming Languages: Python, C, C++, Icarus Verilog• Libraries and Tools: PyTorch, Tensorflow, sklearn, numpy, OpenCV, ROS, Django, GitHub	
ACADEMIC HONORS & AWARDS	<ul style="list-style-type: none">• Won 2nd place in Intelligent Ground Vehicle Challenge 2019 held at University of Oakland, in the AutoNav subcategory as a student member of Autonomous Ground Vehicle (AGV) Research Group. Jul 2019• Secured KVPY fellowship, with All India Rank of 543 (General Category). Apr 2018• Ranked first in mathematics department, (original major was Mathematics and Computing) and in top 1%, among first year undergraduate students (~11/1400) Jul 2019	
RELEVANT COURSES	Natural Language Processing, Machine Learning*, Stochastic Processes in Finance*, Probability and Statistics, Algorithms-1, Algorithms-2*, Programming and Data Structures, Software Engineering, Discrete Structures, Computer Organisation and Architecture*, Compilers*, Formal Languages and Automata Theory, Switching Circuits, Mathematics-1, Mathematics-2 * indicates ongoing courses	

**CO-CURRICULAR
ACTIVITIES**

- Interested in poetry and writing
- Studied Goju Ryu style karate for 5 years, receiving a 'golden brown' belt (second highest in the belt system)
- Former member of campus filmmaking group, Technology Filmmaking and Photography Society (TFPS). Was involved in screenwriting and shooting of '[Carpe Diem](#)', as part of Fresher's Productions.