Naman Jain

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EDUCATION

Indian Institute of Technology Gandhinagar Gandhinagar, IND
Bachelor of Technology with Honours in Computer Science and Engineering, GPA: 8.4/10 *Jul. 2016 – Aug 2020*
Awards: Award for Outstanding Research (1 out of 180+ students)

WORK EXPERIENCE

Co-Founder, CTO Apr. 2022 – Sept 2022
Alby - Curate the best of the Internet *Bengaluru, IND*
- Led product and development
- Built an AI system which curates and ranks news articles
- Built a social media application using React Native and Firebase, used by 1500+ people
- Had to close down due to lack of funding

Founder-In-Residence Apr. 2022 – July 2022
Entrepreneur First *Bengaluru, IND*
- Joined the 7th cohort with 3% acceptance rate to ideate and build a company

Research Engineer | *Deep Learning, Sensor Calibration* Aug. 20 – Mar 22
Deepen AI *Hyderabad, IND*
- Developed deep learning models resulting in reduction of data labelling time by upto 40% and worked on innovative ways to calculate accurate sensor calibration
- Delivered end-to-end feature from literature review, algorithm exploration to integration with annotation and calibration tool
- Deployed systems on cloud and developed frontend UI using APIs and Javascript to access the models
- *Dataset*: Real-world traffic sequences recorded using vehicles' camera and LIDAR sensors
- *Deep learning projects*:
  * *2D Object detection*: Generating object pre-labels in 2D images (vehicles, traffic signs and pedestrians)
  * *Interactive segmentation*: Accurate 2D masks for objects with minimal human interaction cost
  * *Superpixel segmentation*: CNN based superpixels with dynamic resolution and edge-based loss
  * *Video classification*: Tracking lane change event of vehicles in long 2D sequences
  * *2D Occlusion detection*: Classifying objects based on the percentage of occlusion
  * *3D Path correction*: Correcting vehicle trajectory in LIDAR sequences for high quality labels
- *Calibration Projects*:
  * Loop-based multi-sensor calibration optimisation
  * LIDAR-Camera extrinsic calibration
  * Target based Multi-LIDAR calibration

RESEARCH EXPERIENCE

Undergraduate Research (Data Science and ML)

Publications and Posters
- ***Naman Jain***, and Mayank Singh. *"TweetPap: A Dataset to Study the Social Media Discourse of Scientific Papers." Poster,* **ACM/IEEE JCDL 2021**
  * Explored ways to account for the affect of social media discourse on research impact of scientific literature
  * Demonstrated web mining and data anlytics skills to curate and process large-scale datasets

- *Davinder Singh,* ***Naman Jain***, *Pranjali Jain, Pratik Kayal, Sudhakar Kumawat, Nipun Batra "PlantDoc: A Dataset for Visual Plant Disease Detection." Short Paper,* **ACM IKDD CoDS-COMAD 2020**
  * Curated dataset of 2,600 images to classify 17 plant diseases by leaf detection in real-life farm setting
  * Applied transfer learning to increase classification accuracy on farm images by ∼40% from previous works
  * Developed mobile-application and deployed model using Tensorflow-Lite to classify disease in plant leaves

- *Monarch Parmar,* ***Naman Jain***, *Pranjali Jain, P Jayakrishna Sahit, Soham Pachpande, Shruti Singh and Mayank Singh. "NLPExplorer: Exploring the Universe of NLP Papers." Demonstrations,* **ECIR 2020**
  * Developed web-portal for indexing, searching, and visualizing NLP research papers to keep up with trends

* Applied NLP techniques (topic modelling, full-text based visualisation & generating citation graph) and web mining (curating NLP papers). Portal have had 4K+ recurring users post publication.

- ***Naman Jain**, and Mayank Singh. "The Evolving Ecosystem of Predatory Journals: A Case Study in Indian Perspective." Full Paper, **ICADL 2019***
  * Analysed 800+ journals to devise data-driven signals for flagging predatory scientific literature and show how predatory publishers are evolving and bypassing standard regulations
  * Learnt data mining to compile and process large-scale datasets. Results praised by education policymakers

- ***Naman Jain**, Pranjali Jain, Pratik Kayal, Jayakrishna Sahit, Soham Pachpande, Jayesh Choudhary, Mayank Singh. "AgriBot: Agriculture Specific Question Answer System." **3rd Best Paper Award** from of 300 submissions, Full Paper, **ICSTEMVG 2019***
  * Developed AI-chatbot for Indian farmers to give 24*7 access to information about farming practices
  * Contributed in data preprocessing and similarity-based query retrieval algorithm powering the chatbot's replies

INTERNSHIP EXPERIENCE

Data Science Intern | *Prof. Minsu Park* — Mar. 2021 – Jul. 2021
New York University - Abu Dhabi Campus — *Remote*
- Reviewed literature in network theory and led discussions to finalise impactful research problem statement
- Conducted experiments on social networks to verify friendship paradox's presence and its influence in homophily networks and community-based social networks

Machine Learning Intern — Jun. 2019 – Jul. 2019
Observe AI — *Bengaluru, IND*
- Developed active learning based (ALB) approach to predict temporal labels in customer service call transcripts
- Engineered web-app to label phone calls by ALB method. Led to increase in annotator's efficiency by >50%

Data Science Intern | *Prof. Sergio Moro* — May 2018 – Jul. 2018
Information Systems Lab, ISCTE-University Institute of Lisbon — *Lisbon, PRT*
- Developed topic modelling approach to extract co-occurrence of tourism and tech keywords in 20K+ news articles
- Analysis helped business opportunists and consultants to account for the resulting market gaps

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, JavaScript, HTML/CSS
Frameworks and Tools: PyTorch, Tensorflow, React, Node.js, Django, MongoDB, Python Data Science Stack

TECHNICAL VOLUNTEER

Teaching Assistant | *CS613: Natural Language Processing 2019*
- Mentored five groups of students in course projects. Three of them went ahead with publication

Teaching Assistant | *Short Course on Data Science and Analytics*

Organiser | *PyData Gandhinagar Meetup*

Sub-Reviewer | *Under Prof Minsu Park*

HONORS

Travel Grants (ECIR '20, CoDS-COMAD '20, ICADL '19)
Country-wide topper in Physics and Chemistry in 2016 High School Examination (Overall grade in Top 1% percentile)
Top 1% percentile in Engineering Entrance Examination (JEE Mains and Advanced)
KVPY Fellow 2015 (∼2% selection rate)

EXTRA CURRICULARS

Founder & Secretary | *Vinteo, Film Making Club of IIT Gandhinagar*
Made over 15 short films, started a hobby group which got instituted as club (3 to 30 people), participated in 5+ film festivals, conducted workshops on editing & direction and managed the club's Youtube channel

Core Committee Member | *Amalthea '17, Annual Technical Summit of IIT Gandhinagar*
Managed event expenses (approx. $35,000), team of 120 people, D-Day operations and sales for Exhibition stalls