Jatin Dholakia
Software Engineer
Electrical Engineering with Minor in Computer Science

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Education

Degree	Institution	CPI / %	Year
B.Tech	IIT Gandhinagar	8.24	2016 - Present
Class XII	Shiv Jyoti School	91.80	2015-2016
Class X	Nand Vidya Niketan	10.00	2013-2014

Internships

- **Platform Engineering Intern, Google-ASL Data-pipeline, Quantiphi Analytics [May-July 2019]**
  - Built a data-pipeline for a retail company to forecast its sales based on past data, using Google Cloud Platform. Learnt to use GCP services like BigQuery, AppEngine, Endpoints, AutoML, Cloud Composer etc.
  - Orchestrated various pre-processing and post-processing tasks into the pipeline using Cloud Composer which runs on a Kubernetes cluster.
  - Built a backend web-application using Flask, which served the API calls made by the user.
  - Created an endpoint which would perform user authentication using the credentials provided.
  - Used AutoML Tables to generate predictions on back test splits and evaluate metrics.
- **Summer Intern, Mobile Application for Meter Reading, GUVNL R&D Cell [May-July 2018]**
  - Automated the electric-meter reading process and bill generation using an android app.
  - Developed the application to read the seven-segment display of an electric meter. The application can identify the reading of meter, its unit and the consumer number from the captured image.
  - Learnt to develop mobile applications on android studio, perform image processing tasks on low processing power and work with various android APIs.
  - The application can track the location of user at the time of reading and verify it with previous month's location. It also records other parameters like power factor, voltage and current along with energy consumption.

Projects

- **SentEmoji: Empathetic Conversation Generation, Natural Language Processing [August 2019-Present]**
  - Published in 25th COMAD **(CoDS-COMAD 2020).** Developed a chatbot that generated empathetic responses with emojis to the given context. Used architectures like Transformer encoder and BERT. Used word2vec and emoji2vec to assign emojis to sentences and CNN model to identify the emotion of generated sentence.
- **Detecting Morphological Filtering in Binary Images, Course Project (Digital Image Processing) [November 2018]**
  - Classified images to detect the presence of morphological filtering (erosion and dilation) to address frauds like tampering of documents, reproducing copyrighted material, stealing signature etc.
  - Optimized the search for filtering by eliminating bigger structuring elements. They were obtained by dilation of smaller structuring elements that failed the test.
- **Fiducial Localization in Medical Imaging - Inter IIT Tech Meet 2018 (IIT Madras) [January 2018]**
  - Created a 3D volumetric images of the brain using 200 DICOM images with 100-150 slices in each.
  - Performed pre-processing to clean and label the volumetric image to identify areas where fiducials could potentially be present. Used Hough transform to identify positions of circular regions (fiducials).
- **Indoor Localisation - Inter IIT Tech Meet 2017 (IIT Kanpur) [March 2017]**
  - Developed a device that could locate the position of a Wi-Fi router in an open area. Used triangulation method to approximately determine the direction of router using the RSSI value of Wi-Fi signal.

Technical Skills

- Programming Languages: Python, C, C++, MySQL
- Frameworks and Tools: Tensorflow, PyTorch, MATLAB

Achievements

- Qualified for second round of Jumpstart (Hackathon), from over **1400 participants**. **[August 2019]**
- **Dean's list** award for excellent academic performance in Semester 6. **[August 2019]**
- Secured a Rank of **2548** (ranked in top 0.2% of candidates) in **JEE Advanced (IIT-JEE)**. **[May 2016]**
- Selected for 2nd round of **NSTSE** and secured **4th rank** in physics nationwide and 159 overall. **[2016]**
- Awarded **Certificate of Merit** (by CBSE) for obtaining 'A1' grade in all the 5 subjects in 10th standard. **[2014]**

Positions of Responsibility

- **Core Committee Member, IGNITE IIT-GN [March 2017]**
- **Coordinator, Mean Mechanics Club, Robotics Club of IIT-GN [2017-2018]**