Dhanya Bahadur
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EDUCATION
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Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	6.96
Intermediate	CBSE	Chinmaya Vidyalaya Bokaro	2017	92.80%

Professional Experience

Data Scientist | Guavus   [Jul'21-Present]
*Production Ready Date Prediction for **Manufacturing Site***

- Understood the business context and needs of business owners through interviews and user story development
- Cleaned raw data to engineer features using techniques like **target guided encoding**, **discretisation** and others
- After identifying trends, factors that affected lead time, build three separate models for three constituent process
- Developed machine learning algorithms (regression, decision trees/random forest, neural networks, feature selection/reduction, clustering, parameter tuning) based on the understanding of business needs
- Print, Embedding and Manufacturing Lead Time model predicted the time required for printing, embedding and manufacturing the cards respectively
- Performed analysis of results by testing, validating and reformulating models to deliver accurate prediction

Customer Churn Prediction

- Build a Random Forest classification model by reducing the dimensionality of data using **Autoencoders**

Data Analyst | Deterministic Algorithms Lab   [May'20-Jul'20]
*Team Responsible for **Auto-Dubbing**(Research Paper Implementation)*

- Strategically generated the **Talking face** for auto-dubbing by **Lip-Syncing** image with the Lip-sync rate of **3.89**
- Expertise Parallel WaveGAN, a small-footprint **Waveform Generation Method** using a generative adversarial network to achieve the mean opinion score(MOS) of **4.16** within a Transformer-based text-to-speech framework
- Explored and analysed the Machine Learning Algorithms which learn to generate **Raw Audio Waveform** and can **Synthesize audio** from other domains such as drums, bird vocalizations and piano with the **MOS** of **4.5**
- Performed analysis on the result and surveyed literature about **Synthesizing Speech** from the lip movements

Technical Projects

Self Driving Cars | Research Project   [May'19-Aug'19]
Guiding Professor: Arpita Sinha, Department of System and Controls, IIT Bombay

- Gained insight on **Q-Learning**, used to develop an **Advanced Overtaking Policy** being integrated with **Behaviour-Based Architecture** giving impressive success rate on a complete driver for TORCS simulator
- Using the **Snakeoil Controller** studied behaviour analysis and training methodology used to define a behaviour-based architecture on the **Brake Delay Policy** learned with Q-Learning leading to phenomenal performance
- Presented **technical briefings**, documenting progress, **accomplishments** and problem areas affecting the task
- Developed the skills necessary to perform the daily operational inspections on simulators and deploy maintenance

Junior Engineer | Team Rakshak   [Dec'17-Mar'20]
Guiding Professor- Krishnendu Haldar, Department of Aerospace Engineering IIT Bombay

- Key member of the team working on **UAVs** and provided feedback during all the phases of Operations
- Performed review sessions on flight controller **Pixhawk**, connected with transmitter, GPS and other components
- Configured the bot with **Mission Planner** and **QGround Control**, a full featured **ground station application**
- Worked on **calibrating** the values, setting base parameters and uploading the waypoints to QGround control

Technical Proficiency

- **Software Packages/Library:** Numpy, Pandas, Matplotlib, Scipy, Sklearn, HyperOpt, Optuna
- **Programming Languages: C++**, Python