# **BAKHIL KUMAR**

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#### **EDUCATION**

Mahaveer Institute of Science & Technology

Hyderabad, IN Sep 2014 - Oct 2018

Bachelor of Technology

Major in Electronics and Communication Engineering

Hyderabad, IN Jul 2012 - Jul 2014

Siddhartha Junior College Math, Physics, Chemistry

# **EXPERIENCE**

# Institute for Development and Research in Banking Technology(IDRBT)

Hyderabad, IN Research Associate Sep 2021 - Present

- Created 8 KNIME workflows for explaining black box models using LIME, SHAP and Counterfactual methods and utilised VAE-GAN for using them as a one class classifier in the banking domain.
- Handled 10+ practical lab sessions for Bankers who visit for programmes in IDRBT from different banks.
- Gathered, arranged and corrected research data to create representative graphs and charts highlighting results for presentations.
- Streamlined research processes to meet tight deadlines for multiple projects.
- Collaborated with leadership team to identify relevant questions and determine best methods of collection and performed research into study topics to increase knowledge and to provide valuable contributions.
- Interpreted data analysis results to draw inferences and conclusions.
- Generated data models and performed analysis to produce reports outlining results.

GlobalLogic Hyderabad, IN Apr 2021 - Sep 2021 Associate Analyst

- Carried out for a client of Globallogic (Google) on Google Waymo project for labeling images and videos for self-driving cars using cloud compute tools with a target of 24 images per hour.
- Communicated findings and insights to senior management to establish best practices and guide analysis into action and
- Analyzed data sets using Cloud Compute tools to effectively meet company analysis and reporting requirements.

DevOps Enabler&Co Hyderabad, IN DevOps Engineer Intern Jan 2020 - Jun 2020

- Developed a prototype for CI/CD for a website using GCP, Git, Docker, Kubernetes and Jenkins
- Built automation tools and applications to deploy next-generation platforms.
- Documented project design for reference and future use cases.

# **PROJECTS**

# **Explainable AI for Finance**

8 KNIME processes were refined to learn a black box model using a generalised linear model and to use LIME/SHAP to describe the model's choices.

#### Automated Hate Speech Detection and the Problem of Offensive Language

- Studied and worked on this original paper by Thomas Davidson, Dana Warmsley, Michael Macy, Ingmar Weber
- Employed Deep Learning models for better performance while analysing and attempting various preprocessing approaches utilising F1 Score as a metric. We got 0.91 as standard compared to published 0.90

#### **Security for Industrial Machinery**

• Industrial machinery shall be handled and controlled in a safe and efficient manner (via a 8 digit password-based access control system) and will only be used by those individuals who have been identified by the relevant industries. This improves the dependability of computers and protects them from damage by people who don't have access to them.

## **Smart Irrigation System**

 We built a prototype for agricultural irrigation in which we employ 3 sensors (water level, humidity, and soil moisture) and automation to work on various fields by programming a 8051 microcontroller to use the appropriate sensors.

## **SKILLS**

Python, Artificial Intelligence, Linux Administration, R, Natural Language Processing, Kubernetes, GIT, Deep Learning, Docker, Machine Learning, Data Analysis, Predictive Modeling, Predictive Modeling & Analytics, Data Visualization, Data Mining, Computer Vision, MySQL, GCP

## **SOCIAL LINKS**

Linkedin: <a href="https://www.linkedin.com/in/theakhilb">https://www.linkedin.com/in/theakhilb</a> Github: <a href="https://www.github.com/theakhilb">https://www.github.com/theakhilb</a> Portfolio: <a href="https://theakhilb.github.io">https://theakhilb.github.io</a>

# **ACHIEVEMENTS**

- Got awarded 3 times as "Best employee of month" in Globallogic in a 6 months period.
- Involved in 4 research papers with productive work in a period of 1 year at IDRBT.