# RASHMI RANJAN PATTNAIK

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## WORK EXPERIENCE

### Software Engineer Intern
**Honeywell Tech. Pvt. Ltd**

 June 2020 – July 2020        Bangalore,India

- Envisioned a Virtual Aircraft Assistant from scratch to decrease the workload of the crew and increase the safety of the aircraft.
- Deployed the virtual assistant on an Edge Device which receives feed from a camera and trained model from cloud.
- Implemented using a Deep Learning model YOLO on Darknet framework after comparing results of multiple models like Faster RCNN, SSD.
- Achieved a best case recall of 95% at 24 Frames Per Second on a NVIDIA TX2 edge device receiving live video.
- Designed an User Interface to display the live object detected video over a local network and corresponding graph for visualization.

### Facebook Grant - Social Science One Project
**Social Sciene One-Facebook**

 July 2020 - April 2021        B.tech Final Project- IIT KGP

- Worked under Prof. Animesh Mukharjee and part of social science one group to derive key inferences from Deferentially private Condor data set.
- Used a three tier based hateXFalse classification system to classify the noise and censored data.
- Used a stack of keyword search on sql database, a Deep learning based pre-trained Bert architecture and final annotator as the three tier system.
- Used unsupervised Clustering to cluster the parent-domains of classified posts and derived key inference based on the demographics of the Facebook users.
- The work is currently being continued to be published as a short paper in the conferences in late 2021.

### Multi-label News Corpus Classification
**Term-project NLP**

 Nov 2019– Dec 2019        IIT KGP

- Created a multi-label news corpus classification model using the character level CNN text classifer using Tensorflow Framework with keras as the high level framework.
- Used a Scrapy bot made with Python to scrap the news data from Reuters.
- Achieved a precision of 0.8 on the 19 class multi label classification that out performed the kernel based SVM classifier of the TA.

### Statistical Inference from Whatsapp data
**project NLP**

 Mar 2020– Sept 2020        IIT KGP

- Worked under Prof. Animesh Mukherjee on deriving statistical inferences from a social platform(Whatsapp) for detecting the interplay between politics and religion.
- The major methods that were applied to establish an relation among different clusters of users were K-means clustering on GCA measures of a time series data, contextual topical modelling using Bert embeddings,LDA, corelation of emoji with context.

### Stroke detection in Brain MRI Images
**project Image processing**

 May 2019– June 2019        IIT KGP

- Worked for a brief period under Professor Nirmalya Ghosh, towards detection of stroke in Brain MRI images using Image processing techniques such as SIFT,ORB and various other texture detection algorithms to filter stroke from normal brain cells in the summers of 2019.

## EDUCATION

### B.Tech  in Mechanical Engineering
**IIT Kharagpur**

 July 2017 – April 2021        Kharagpur

- CGPA 8.89

### High school Education
**D.A.V Pokhariput**

 2014 – 2016        Bhubaneswar

- CGPA 10.00

## SKILLS AND EXPERTISE

### Programming language

- Python | C++ | C | Node.js | JavaScript | SQL

### Technical Skills

- Machine Learning | Convolutional Neural Networks | Natural Language Processing

### Libraries

- Tensorflow | Keras | Darknet | Numpy | Pandas | Scrapy | Scikit-Learn

### Other skills

- Data Analysis using ML | Image Processing

# ACHIEVEMENTS

## Fabulous Contribution: Vision Based Analytics
**Honeywell Tech. Pvt. Ltd.**

📅 July 2020      📍 Bangalore

- Awarded by my mentor Mr. Nayyar Rao at Honeywell for envisioning the product for Virtual Aircraft Assistant and executing a fully functional product with limited resources, serious time constraint and virtual interaction during the period of summer internship.

## Flipkart-Grid contest
**Dare2compete**

📅 Feb 2019

- Secured Top 20 rank in the institute and qualified for the third round of Flipkart Grid- Te[a]ch the Machines 2019 contest for predicting bounding box for sales products using Machine learning models such as bagging regression algorithms and IOU as an evaluation measure.

# IMPORTANT COURSEWORK

- NLP •Artificial Intelligence
- Design Optimization •computer Networks
- Probability & Stochastic Process •computational Number Theory
- Algorithm and Programming lab •Transform Calculus

# EXTRACURRICULAR ACTIVITES

## Interhall Data Analysis
**IIT KGP**

- Worked on detecting the type of congestion that might occur in the telecommunication industry by training a machine learning model on tower statistics in the Interhall DataAnalysis competition.(Mainly worked on the feature extraction methods and bagging algorithms.)

## NSS Gold Medalist
**IIT KGP**

- Won the gold Medal in NSS annual camp in December 2017 for being the part of the unit that secured the first position.
- It is the highest medal that is given by NSS-IIT Kharagpur that depicts the level of dedication towards a social cause.

# KEY QUALITIES

- Hard Working
- Team Player
- Determined attitude
- Always backtracking and improvising
- Hunger for new technology