

Kshitij Soni

kshitijsoni@iipe.ac.in | +91-9179873135 | House No 70, Kalash, Phase I, Riddhi Siddhi Colony, Rajnandgaon, Chhattisgarh, India - 491441

LINKS

GITHUB github.com/kshitijsoni

LINKEDIN [linkedin.com/in/kshitij-soni/](https://www.linkedin.com/in/kshitij-soni/)

EDUCATION

**INDIAN INSTITUTE OF PETROLEUM & ENERGY VISAKHAPATNAM | BACHELOR OF TECHNOLOGY
PETROLEUM ENGINEERING** Visakhapatnam India | August 2019 - August 2023
GPA: 8.25

**INSTITUTE OF COMPANY SECRETARIES OF INDIA | CHARTERED SECRETARY BANKING, FINANCE,
SECURITIES AND CAPITAL MARKETS, ADVANCED COMPANY LAW** Visakhapatnam India | September 2019 -
September 2024
GPA: 9.2

EXPERIENCE

INDIAN INSTITUTE OF PETROLEUM AND ENERGY VISAKHAPATNAM | RESEARCH ASSOCIATE
Visakhapatnam, India | September 2020 – Present

- The machine vision system can give an exhaustive picture of the wear and tear zone and thus can indicate the severity more efficiently. The measurement of average tool wear and tear with the present vision system will be expected to be in close agreement with that with the digital microscope.

INDIAN INSTITUTE OF TECHNOLOGY KANPUR | SUMMER RESEARCH INTERN Kanpur India | April 2020 – June 2020

- Explored the extent to which the ADR assertive text segments can be classified from text based data sources particularly social media sources and structured datasets. Exported NLP techniques to extract informative and portable features from text coming from different sources. (Due to covid 19 breakout we completed this internship remotely)

EXPERTSHUB INNOVATION EDUCATION FOUNDATION | MARKETING AND OUTREACH INTERN
Visakhapatnam India | Dec 2019 – April 2020

- Supervised the Entrepreneurship Technology Outreach Program and Global Innovation Challenge 2020 organized by Expertshub in collaboration with Solaris and Saksham Ecell IIM Udaipur. Guiding colleges across Andhra Pradesh & Telangana and Chhattisgarh regions to develop Innovation and Incubation Centres

SKILLS

PROGRAMMING LANGUAGES	Python, C++, C, MATLAB
LIBRARIES/FRAWORKS	Flask, Keras, TensorFlow, NLTK, Numpy, Pandas, Matplotlib, Open CV, Scikit Learn
TOOLS / PLATFORMS	Azure, Amazon Web Services, Google Cloud Platform
DATABASES	SQL, Pig, Tableau, Hadoop

PROJECTS / OPEN-SOURCE

OPTIMIZATION OF TOOL WEAR AND TEAR USING DIGITAL IMAGE PROCESSING | MATLAB

The machine vision system can give an exhaustive picture of the wear and tear zone and thus can indicate the severity more efficiently. The measurement of average tool wear and tear with the present vision system will be expected to be in close agreement with that with the digital microscope.

**DEEP LEARNING FOR DETECTION OF DIABETIC RETINOPATHY | KERAS, TENSORFLOW, PANDAS,
OPENCV, NUMPY, SCIKIT IMAGES, AWS**

Identifying diabetic retinopathy using convolutional neural networks. This is a research project and the paper is under review in IEEE Transactions on Pattern Analysis and Machine Intelligence

BRAINNET: AUTOMATIC BRAIN TUMOR DETECTION AND SEGMENTATION | SCIKIT IMAGE, KERAS, NUMPY

A four-layer Convolutional Neural Network (CNN) model that, besides n4ITK bias correction, requires minimal pre-processing. The model can distinguish between and predict healthy tissue, actively enhancing tumor, and non-advancing tumor regions (Figure 7). The local invariant nature of CNNs allows for the abstraction of token features for classification without relying on large-scale spatial information that is inconsistent in the case of tumor location. This is a research project and the paper is under review in IEEE Transactions on Pattern Analysis and Machine Intelligence

MACHINE LEARNING APPLICATIONS ON CRYPTO TRADING | NUMPY, PANDAS, SCIKIT LEARN, MATPLOTLIB github.com/kshitijsoni/Machine-Learning-Applications-on-crypto-trading

Artificial intelligence to trade cryptocurrency based on future market predictions constructed from historical market data, relevant financial trends, and social media metrics. This project includes a collection of miscellaneous python scripts for cryptocurrency investing, trading, and data analysis. This project is currently under development

VISUAL CRYPTOGRAPHY | C++ github.com/kshitijsoni/visual-cryptography

Implementation of various visual cryptography schemes, written in C++.

ONLINE EXAMINATION SYSTEM | HTML/CSS, JS, PYTHON, SQL

AI proctored Online Examination System that saves a lot of manual work and evaluates candidates through a fully automated system.

ADTRAP: ADVERSE DRUG REACTION CLASSIFICATION USING NLP TOOLS AND DEEP NEURAL NETWORKS | PANDAS, NUMPY, NLTK, SEABORN, SCIKIT LEARN, KERAS, MATPLOTLIB, PYSPARK github.com/kshitijsoni/ADTrap

Investigated the performance of supervised classification approaches on data from social media to data from other more structured and unstructured sources for Adverse Drug Reaction Classification.

SPEECH RECOGNITION SYSTEM | KERAS, TENSORFLOW, NUMPY, PANDAS, MATPLOTLIB

Well optimized RNN Training system in which the system does not need hand design equipment to model background noise, reverberation, or speaker, vibration, but instead directly learns a function that is robust to such efforts.

HONORS & AWARDS

- Beta Microsoft Learn Student Ambassador: The Microsoft Learn Student Ambassadors community is for students—like you—who want to use tech to solve real-world problems with like-minded peers, establish themselves as mentors and leaders in their community, and amplify their impact.
- Lead - Google Developers Student Club IIPE Visakhapatnam: By joining a GDSC, students grow their knowledge in a peer-to-peer learning environment and build solutions for local businesses and their community.
- Editor at Newsletter Committee IIPE Vizag: Newsletter Committee of IIPE Vizag is an initiative of the IIPE faculties and students to promote student engagement in extra-academic activities and to maintain an easy to access record of all the major events and achievements of IIPE Vizag.
- Member of Organising Committee of ReOPEN 2020: Research Opportunities in Petroleum Energy and Natural Gas – 2020 was a four-day international workshop organised by IIPE Vizag.
- Member of Technical Committee of IIPE Vizag: Technical Committee of IIPE Vizag aims to promote, organise, sponsor and mentor the events, workshops, conferences, seminars and related there majorly focusing on technical domain.
- Recipient of Facebook PyTorch Scholarship 2020
- Delivered a Talk - Making Smart Phone Selfies into Powerful Diagnostic Tools. (Feb 21, 2021). K J Somaiya College of Engineering, Mumbai -400077, India.