

RITIKA MANGLA

Thane, Maharashtra | ritikamangla.rm@gmail.com | +91 9769296966 | [LinkedIn](#) | [Github](#)

EDUCATION

Veermata Jijabai Technological Institute (VJTI), Mumbai, India **Expected: May 2022**
Secured **First Rank** (CPI of 9.82/10.0) in a class of 168 students.
Relevant Courses: Data Structures, Algorithms, Operating Systems, Computer Networks, Database Management, Compiler Design, Computer Organization, Machine Learning, Artificial Intelligence, Linear Algebra etc

PROFESSIONAL EXPERIENCE

Goldman Sachs, Bangalore *Summer Analyst – Corporate and Workplace Solutions* **Jun – July 2021**

- Optimized the manual process of event management, as a part of the One Goldman Sachs Initiative.
- Designed an event dashboard to query past events with various filter criteria to analyze its impact.

Yozu, IIT Bombay *Artificial Intelligence Intern* **Dec – Jan 2021**

A startup incubated at IIT Bombay, Yozu is a AR-VR based learning platform with an inbuilt voice assistant.

- Developed an AI-based conversational bot using a state machine approach with TTS functionality.
- Devised an LSTM-based Question Matching algorithm for answering mid-conversation user queries.

TechnoPurple Tracking, Mumbai *Machine Learning Intern* **May – Jul 2020**

India's #1 app for monitoring critical field services and technology partner for Indian Chemical Council.

- Implemented Laplacian filters to separate dark and blur images to examine site cleanliness for Emrill Services LLC (Dubai). [View my work](#)
- Engineered a template matching & OCR based algorithm to determine success of a rally of Bhartiya Janta Party (the current ruling party of India) – reduction in false positive and false negative count by 67%.

PROJECTS

Bearing Fault Analysis | Python, Machine Learning **Mar – May 2021**

- Developed a novel approach using dynamic regression to estimate the remaining useful life of a bearing.
- Achieved a model accuracy of 98.2% using the PRONOSTIA platform for bearing accelerations.
- Achieved better prognostic performance as compared to SOTA techniques - Kalman filter, exponential model.

Cleangenix | Neo4J, PostgreSQL, NodeJS [View my work](#) **Sep – Dec 2020**

- Engineered a solution to promote active user participation in increasing city sanitation under the Solid Waste Management (SWM) Department of BMC (BrihanMumbai Municipal Corporation).
- Utilized spatial and graph database management techniques for civic complaint redressals based on location.
- Developed an algorithm to identify trash from geotagged images using a Mask R-CNN model.

Startup Quest | Python, Flask [View my work](#) **Feb 2020**

Winner of HackIT 2.0 amongst 300+ teams– Hackathon organized by KJSCE, India

- Created a social media and repository bot which indexes over 2000+ potential startup ideas in a database.
- Developed a news feed scraper to trace activities of the projects by web scraping data using BeautifulSoup.
- Designed a CRM style dashboard for investors to add growing startups to their watch list.

PUBLICATIONS

S. Barhate, R. Mangla, D. Panjwani, S. Gatkal and F. Kazi, "[Twitter bot detection and their influence in hashtag manipulation](#)," 2020 IEEE 17th India Council International Conference (INDICON), 2020, pp. 1-7, doi: 10.1109/INDICON49873.2020.9342152. [View my work](#)

- Developed a novel approach of a 'bot-score' using Random Forest classifier to detect bots in Twitter.
- Formulated an unsupervised technique to cluster users based on activity-based features.
- Gathered insights of user hashtag word clouds along with hourly and weekly statistics.

S. Gatkal, D. Panjwani, S. Barhate, R. Mangla and F. Kazi, "Community Detection and Impact of Bots on Sentiment Polarity of Twitter Networks," 2021 IEEE ASIANCON, 2021, pp. 1-6, **Accepted**

- Generated a directed network of Twitter users and detected their communities using Louvain method.
- Analyzed the influence of a node (bots and non-bots) in a community given by its eigen centrality.
- Determined the influence of bots in the overall sentiment polarity of its community.

D. Joshi, A. Parikh, R. Mangla, F. Sayed, Dr. S. K., "[AI Based Nose for Trace of Churn in Assessment of Captive Customers](#)," Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 12, Issue 6, June 2021: 622-628

- Conducted a comparative study of 7 ML algorithms tested using statistical evaluative measures (precision, accuracy, Kappa constant) on the popular telecom database – Best classifier was XG Boost: accuracy-82%

SKILLS

- Language and frameworks: C++, Python, HTML/CSS, JavaScript, ReactJS, NodeJS, Express, Bootstrap, Flask, SQL
- Libraries: Pandas, Numpy, Matplotlib, OpenCV, ScikitLearn, Keras, Tensorflow