

RUDRAMANI SINGHA

424 W 119th ST
NEW YORK, NY 10027

www.linkedin.com/in/rudramanisinha/

+1 (917) 215-0526
rgs2151@columbia.edu

EDUCATION

Columbia University

New York, NY

Master of Science in Biomedical Engineering

Expected Dec 2023

- Shardashish Interschool Fellow - The UNM Foundation
- Specializing in Machine Learning and Neural Engineering

University of Mumbai

Mumbai, MH

Bachelor of Engineering in Information Technology

Jul 2022

- Undergraduate research assistant to Prof. Sunil Wankhade & Prof. Nilesh Rathode
- Head Of Department, ABIT-RGIT & IEEE-RGIT; Technical Consultant & Trainer, RGIT-CodeCell

EXPERIENCE

NEUROVISION LLP

Mumbai, MH

Founder & CEO

Jun 2021 - Present

- Incorporated a small specialized Machine Learning Research & Consultancy Firm with a team of 10 engineers
- Drove over 10 B2B customer success; Customers include Nulllot, Cart Geek, and Axis Technical Group
- Developed solutions ranging from site optimizations with Google Analytics post-processing to automation using seq2seq chatbots

VAO

San Francisco, CA

Machine Learning Consultant

Dec 2021 - Mar 2022

- Collaborated with Prof. Valentina Pedoia (UCSF + UC Berkeley) and Dr. Davide Onofrio (Deep Learning Senior Manager at NVIDIA) as founding engineers to design NLP solutions focused on improving supply chain predictability and visibility
- Engineered parallelly traversable decision graph framework for hierarchical classification by multiple simultaneous models to make incremental decisions and provides retroactive justification through Q&A for over 500 classes
- Devised model inspection, logging, and data caching techniques throughout pipeline from scratch; Accelerated R&D performance and problem tracking by multiple folds and enabled rapid development of working prototype in less than 2 months
- Scripted visualizations to generate dynamic explorable solutions and pitched those demos to investors
- Trained Custom Models: T0, T5, BERTs, BARTs, RoBERTas, YOLOv5, custom DNN classifiers, and Dense Passage Retrievers
- Pipelines Created: Reader Retriever Pipeline, Data Ingestion Pipeline, Model Wrappers for R&D with Haystack & HuggingFace
- Developed skills/frameworks: Information Retrieval Systems (IRQA), Text2Text Generation, Data Ingestion, Abstractive Summarization, Framework engineering, Model Analysis & Inspections, Elasticsearch, FAISS

AZYO

San Diego, CA

Machine Learning Engineer - Intern

Mar 2021 - Dec 2021

- Designed an authentication system using facial recognition and anti-spoofing countermeasures against presentation attacks
- Constructed an exam proctoring system detecting head, gestures, and eye movements to generate a confidence metric with RNNs
- Led development of sign language recognition project from data collection, processing, implementation, to deployment; Achieved 95% accuracy on in-house benchmarks with every batch vocabulary R&D cycle
- Managed a team of 6 game developers to design a VR space for multiplayer online education
- Developed skills/frameworks: Mediapipe, Face-recognition, JavaScript Framework Engineering, Vector Space Mathematics, RNNs, LSTMs, Video Augmentation Scripting, Data Engineering, Unreal Engine, Django, Flask, SQL

CSKA Automation Services Pvt Ltd

New Delhi, IN

Machine Learning Engineer - Intern

Oct 2020 - Feb 2021

- Refactored entire OCR API pipeline and integrated it with Google Vision API for up to 30% faster performance and better accuracy
- Created post-processing engine to support 11+ different document formats with Named Entity Recognition and REGEX
- Developed skills/frameworks: Flask, Tesseract OCR, EAST Detector, Google Vision API, spaCy, REGEX

PUBLICATIONS

- R. G. Singha et al., "Dynamic Pose Diagnosis with BlazePose and LSTM for Spinal Dysfunction Risk Estimation," 2022 4th International Conference on Smart Systems and Inventive Technology (ICSSIT), 2022, pp. 1547-1552, doi: 10.1109/ICSSIT53264.2022.9716509
- R. G. Singha et al., "Vehicle Speed Detection Using Multi-Branch Networks From Temporal Image Pairs," 2022 4th International Conference on Smart Systems and Inventive Technology (ICSSIT), 2022, pp. 301-308, doi: 10.1109/ICSSIT53264.2022.9716386
- Patents (India): IN 202111058826, IN 202111043497, IN 202111034856, IN 202121031007

SKILLS

Fluent in: Python, C/C++, JavaScript, Java, Matlab, R, Pandas, Markdown, React, Bootstrap, Flask, Django, LaTeX, Blender, Photoshop