

Anush Kumar Venkatesh

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Education

University of Colorado Boulder

Master of Science in Computer Science

August 2022 – May 2024

Boulder, U.S.A

Ramaiah Institute of Technology

B.E in Information Science and Engineering, CGPA : 9.48

August 2015 – June 2019

Bengaluru, India

Technical Skills

Languages/ Frameworks: Python, Java, HTML/CSS, JavaScript, Pytorch, GoLang

Developer Tools: VS Code, Eclipse, Amazon Web Services (AWS), Android Studio, IntelliJ

Technologies: Git, GitHub, unittest, Apache Kafka, Oracle SQL, Mongo DB, React js, Node js, Neo4j

Experience

The Mathworks, Inc

Software Engineer intern

May 2023 – Present

Natick, U.S

- Redesigned the user interface of quickstart tool that is part of simulink coder using modern JS standards.
- Implemented a versatile codebase capable of supporting multiple layouts and dynamically displaying different widgets based on the payload received from the backend. It helped in easy adaptation and customisation of the UI by multiple teams.

J.P.Morgan & Chase

Associate Software Engineer

January 2019 – July 2022

Bengaluru, India

- Collaborated to develop a heuristic and Monte Carlo Simulation-based Counterparty Credit Risk calculator in Python. It computed the risk associated with over 3000 clients the firm trades on a day-to-day basis.
- Optimized the distribution logic for processing different clients' data in parallel and reduced execution time by 4 hours.
- Worked with cross-functional teams and laid out a design to use Kafka for ingesting data from 20 plus upstream sources.
- Migrated one-third of the codebase from Python 2.7 to Python 3.6, ensuring backward compatibility.
- Spearheaded a five-person team to train a Reinforcement Learning model as part of the AWS deep racer program internal to the firm. The group stood sixth, competing with over 100 participating teams.

Stride.ai Inc

Summer NLP Intern

June 2018 – August 2018

Bengaluru, India

- Devised a web scraping tool using Python and Selenium to download publicly available documents from financial domains. It reduced 15 weekly person-hours.
- Worked with the team to train a Semantic Role Labeling model for financial data. Led the effort to improve the F1 score from 87.5 to 91.67 by performing a feature ablation study.

Publications

Anush Kumar, Nihal V. Nayak, Aditya Chandra and Mydhili K. Nair. Study on Unsupervised Statistical Machine Translation for Backtranslation. *Proceedings of Recent Advances in Natural Language Processing (RANLP 2019)*, Varna, Bulgaria. ([paper](#))

Projects

Connected Papers on Arxiv Web App | *GoLang, React, Neo4j* |

April 2023

- Collaborated with a team of 6 to design a scalable web app to display the citation network of a research paper in arxiv to the user.
- Constructed the backend service using GoLang that parsers over 10000 papers in semantic scholar web API and builds a graph of all related influential papers and caches the result in Neo4j.

Mathematical Reasoning using MathQA dataset | *Pytorch, OpenNMT* |

March 2022

- Built a Transformer based Fixer module to repair incorrectly annotated data points from the MathQA dataset using Self-Supervision. It corrected 16% of inaccurately labeled data from the training set.

Soft Braille Desktop App | *Python, PyQt* |

July 2018

- Created a desktop app to help teachers prepare learning material for visually impaired children from elementary school.
- Introduced an innovative algorithm to represent edges of an image with Braille characters to mimic tactile graphics.
- Developed a GUI component to assist in converting an English textbook to its Braille equivalent.
- Recognized with Inspiration award by Ministry of Social Justice, Govt of India.

Post-IT Android App | *Java, Android Studio, Firebase* |

October 2017

- Created an android application to keep track of upcoming events around a college campus.
- Implemented a user authentication system that allows only systems administrators to post, update or delete events.