Anush Kumar Venkatesh

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Education

University of Colorado Boulder	**August 2022 – May 2024**
Master of Science in Computer Science, GPA : 4.0	*Boulder, U.S.A*
Ramaiah Institute of Technology	**August 2015 – June 2019**
B.E in Information Science and Engineering, CGPA : 9.48	*Bengaluru, India*

Technical Skills

Languages/ Frameworks: Python, Java, HTML/CSS, JavaScript, Pytorch, GoLang, React js, Node js
Developer Tools: VS Code, IntelliJ
Technologies: Git, GitHub, Apache Kafka, Oracle SQL, Mongo DB, Neo4j, AWS, Kubernetes

Experience

The Mathworks, Inc   **May 2023 – August 2023**
Software Engineer intern   *Natick, U.S*

- Coordinated with UX teams to gather end-user feedback and redesigned existing UI of a toolbox in matlab addressing 4 key pain points.
- Implemented a versatile front-end application employing modern JavaScript standards, capable of supporting multiple layouts and dynamically rendering diverse widgets based on payload received from backend. It facilitated easy adaptation and customization of UI by multiple teams within the firm.

J.P.Morgan & Chase   **January 2019 – July 2022**
Associate Software Engineer   *Bengaluru, India*

- Collaborated with cross-functional teams to develop a heuristic and simulation-based credit risk calculator in Python. This tool efficiently 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.
- Drove the effort to integrate Kafka, replacing Oracle DB, into an existing application to consume data from 20+ upstream sources. It further aided in reducing licensing cost associated wit Oracle DB usage.
- Migrated one-third of the codebase from Python 2.7 to Python 3.6, ensuring long term support 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   **June 2018 – August 2018**
Summer NLP Intern   *Bengaluru, India*

- Devised a web scraping tool using python and selenium to efficiently and automatically download publicly available documents for annotations, leading to a 15-hour reduction in weekly manual effort.
- 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.

Projects

Connected Papers on Arxiv Web App | *GoLang, React js, Neo4j, Kubernetes, GCP* | ⃝   **April 2023**

- Collaborated with a team of 6 to design the architecture of a web app and display the citation network for a given research paper in arxiv to the user. Laid out the CI/CD pipeline through GitHub actions and Terraform.
- Led the development of backend service in GoLang to parse over 10000 papers in semantic scholar web API and builds a graph of all related influential papers and stores the result in Neo4j.

Mathematical Reasoning using MathQA dataset | *Pytorch, OpenNMT* | ⃝   **March 2022**

- Built a Transformer based Fixer module to auto-correct incorrectly annotated data points from the MathQA dataset using Self-Supervision. It corrected 16% of inaccurately labeled data from the training set.
- Retraining the mathematical reasoning model upon augmenting the corrected data points further improved the overall accuracy by 2%.

Soft Braille Desktop App | *Python, PyQt* | ⃝   **July 2018**

- Created a desktop app to assist teacher in converting an English textbook to its Braille equivalent.
- Introduced an innovative algorithm to represent edges of an image with Braille characters to mimic tactile graphics.
- Recognized with Inspiration award by Ministry of Social Justice, Govt of India.