

# Anush Kumar Venkatesh

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## Education

### University of Colorado Boulder

*Master of Science in Computer Science, GPA : 4.0*

**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, 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

*Software Engineer intern*

**May 2023 – August 2023**

*Natick, U.S*

- Coordinated with UX teams to redesign an existing MATLAB toolbox UI, addressing 4 key end-user pain points.
- Implemented a versatile front-end application using modern JavaScript standards, supporting and dynamically rendering 20+ custom UI widgets based on backend data.
- Facilitated easy adaptation and customization of the developed UI code-base for over 5 internal teams.

### J.P.Morgan & Chase

*Associate Software Engineer*

**January 2019 – July 2022**

*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 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 with Oracle DB usage by 40%.
- Migrated 35% of existing codebase from Python 2.6 to Python 3.6 to ensure long term support.
- 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.

## Projects

### HyperParameter Tuning as a Service | *Python, React.js, Kafka, MongoDB, Kubernetes, GCP* | **December 2023**

- Built a microservice-based web app for parallelized hyper-parameter tuning of ML models on the cloud for custom user datasets, resulting in a 30% reduction in training time compared to a single machine.
- Developed the backend to process incoming job requests, showcase ongoing and historically completed jobs for users. Configured Kafka to ensure efficient message passing between services.
- Wrote deployment scripts for launching the application on Google Kubernetes Engine.

### 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. It aided in 20% quicker and easier exploration of connected research papers.
- Led the development of backend service in GoLang to parse over 10000 research papers and builds a graph of all related influential papers and stores the result in Neo4j.

### Soft-Braille Desktop App | *Python, PyQt* |

**July 2018**

- Created a desktop app to assist teachers in automatically translating an English textbook to its Braille equivalent, helping in an 80% conversion of primary school materials.
- 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.

### El-Corteza Web App | *JavaScript, Bootstrap, JSP, HTML/CSS* |

**June 2016**

- Built a mock e-commerce web application as part of java vocational training to accept food orders.
- Secured the best project award, contesting against 50 participants.