Nitesh Ramakrishnan

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EDUCATION

University of Texas at Dallas — Richardson, TX
Master of Science in Computer Engineering (CGPA – 3.53) — *Anticipating May 2021*
SRM Institute of Science and Technology — Chennai, India
Bachelor of Technology in Computer Science and Engineering — *May 2019*

EXPERIENCE

Software Developer Intern, *Council of Scientific and Industrial Research (CSIR)* — *Jan 2019 – May 2019*

- Developed a computer vision framework to detect objects in visual images using **Convolutional Neural Networks** (CNN).
- Reduced the distortion and augmented the images to extract hidden image features and boost accuracy.
- Implemented the neural network using **TensorFlow** and trained the model using **Keras**.
- Accomplished **92%** detection accuracy of the model on a random test dataset.
- Avoided **overfitting** of the model by restricting the filter size in the hidden layer and also by using **dropout** layers. The light weight model was trained in **CPU** which makes it optimal by reducing the hardware cost.

CS Outreach Instructor, *University of Texas at Dallas* — *Dec 2019 – Present*

- Volunteered at local schools to enlighten school students with coding concepts using online tools.
- Organized activities and coding camps for school students in the **Engineering Week** event hosted at UTD.
- Conducted summer online coding camps for programming with **C++, Java, JavaScript, and HTML/CSS**.
- Mentoring students to implement their projects and ideas related to coding at Enrich Kid's Mind organization.

SKILLS

Languages : C++, JAVA, JavaScript, Python, SQL
Databases : Mongo DB, PostgreSQL, MySQL
Web Technologies: HTML5, CSS, JQuery, ExpressJS, ReactJS, NodeJS

ACADEMIC PROJECTS

Exercise Tracker Application — *May 2020 – June 2020*

- Developed a Full-stack web application using **MERN stack** for tracking users and their exercises.
- Created end-to-end implementations using **NodeJS** and **Mongo DB** in the backend.
- Designed the frontend using **ReactJS** and Bootstrap to render the HTML components in real-time.

Soccer Application — *May 2020 – June 2020*

- Setup routes for Get and Post requests and to send responses as a **JSON** object using **ExpressJS**.
- Created a simple form to input player details and performance which is stored in Mongo DB.
- The frontend was built using ReactJS and **Materialize CSS** to display the player details in an attractive design.
- The website was developed as a self-learning project to exhibit my knowledge in Full-stack.

Data Replication in Distributed Computing — *Mar 2020 – May 2020*

- Implemented multiple client-server communication for data replication in a distributed system.
- Designed a secure hashing protocol to perform concurrent read/write using **multi-threading** (Java).
- For **linearizability** and consistent write, I implemented a quorum-based voting protocol with a **FIFO** priority channel.
- Achieved liveliness conditions to prevent **deadlocks** in the system and simulated the model with multiple test cases.

Real Time Sentiment Analysis of Twitter Hashtags — *Mar 2020 – May 2020*

- Implemented a framework using **Kafka Zookeeper** and **Spark Streaming** to fetch twitter hashtags in real-time.
- Stored and analyzed the sentiment information of the tweets using **Elasticsearch** and classified into categories.
- Visualized the classified data in Elasticsearch using **Kibana** tool.

Library Management System — *Oct 2019 – Dec 2019*

- Developed a Database Management System to efficiently handle a library's operations.
- Designed an efficient database schema and pushed all the records to the database (**PostgreSQL**).
- Integrated a GUI using **Tkinter** (python) for a simple user interface.