

Bharath Kumar R

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EDUCATION

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI (NITT)

Trichy, India

• **Coursework & Electives:** Algorithms and Data Structures, Operating Systems, Database Management Systems, Computer Architecture, Network Security, Data Communications and Networks

B.Tech in Electronics and Communication Engineering (GPA: 8.42/10)

Jul 2017 - Present

EXPERIENCE

MORGAN STANLEY

Bengaluru, India

Technology Summer Analyst

May 2020 - Jul 2020

- Integrated **Apache Kafka** and **Zookeeper** with the reactive **Spring Boot** and **Spring Webflux** middle tier.
- Built a **parser in Java** to transform the XML messages received from upstream.
- Developed a **SVM model** to categorize the messages received and deployed it as a **separate microservice** in **Flask**.
- Exploited **Synthetic Minority Over-sampling Technique (SMOTE)** to balance the minority class in the training set.
- Built a dashboard using **Angular** and leveraged **reactive websockets** to make the application realtime and efficient.
- Tested code with Unit and Integration testing using **JUnit** and **Mockito**.
- **Dockerized** the application and pushed the application to QA.

DELTA FORCE

Trichy, India

Software Developer

Jul 2018 - Present

- The **programming club** and **central webteam** of the National Institute of Technology, Tiruchirappalli.
- Handles most of the **web and app development** for various campus development projects, activities and festivals.
- Conducted an introductory **Algorithms workshop** for more than 100 freshers.

PROJECT HIGHLIGHTS

DigiNITT [Source]

Jul 2020 - Aug 2020

- Designed and built a **paperless office web application** that dynamically generates workflows using **graph structures**.
- Implemented **automatic field identification** by using **Canny Edge Detection** and **Hough Lines Transformation** in **OpenCV**.
- Developed a **dynamic document** and **QR generation module**.
- Developed a **tamper-proof system** by using **Ethereum Blockchain** to store the data and **Solidity** for smart contracts.

Beer Factory, Pragyan [Ref]

Nov 2018 - Mar 2020

- An **online strategy-based**, single-player **resource management** game. Each player competes against a **computer simulated opponent**.
- Designed and implemented the **game API from scratch** in **Django** and the UI in **BabylonJS**, **ReactJS**, **Redux** and **SemanticUI**.
- Wrote models, test codes, game and leaderboard logic views and designed the gamepage UI, reusable menus, display components and made game **mobile responsive**.
- Introduced features like **daily challenges** and added support for **multiple products** like Wine.
- **Dockerized** the application and pushed the application to production. Had around **1K participants** from over **8 countries**.

Virtual Fit [Resnet]

Feb 2019 - Mar 2019

- Developed a **custom clothing store** web application where a user can get his body measured from a photo and can design a custom made shirt online with a large variety of accessories and order directly.
- Used **ResNet-18 Deep Learning Architecture** and **PyTorch** for **predicting body measurements** from uploaded images.
- Wrote a 3D renderer using **BabylonJS** for rendering 3D model of the mannequin.

SKILLS

- **Programming:** C++, Python, Java, JavaScript, PHP, SQL, HTML, CSS
- **Frameworks:** Spring, Django, NodeJS, Laravel, ReactJS, Angular, BabylonJS, PixiJS
- **Other Technologies:** , Docker, Kubernetes, Git, Vim

LEADERSHIPS AND ACHIEVEMENTS

- **Head of Web Operations** at **Festember'20**, International Cultural Festival.
- **Finalist (Top 1% out of 5 lakh participants)** at the **Smart India Hackathon 2020** (Software Edition).
- **Second runner-up** at the **TransfiNITte v2 Hackathon** at NIT Trichy.
- **Top 60 out of 1914 candidates** in the prestigious **Singapore India Hackathon 2019**.
- **Winner (Top 0.01% out of 3 lakh participants)** of the **Smart India Hackathon 2019**.

Nov 2019 - Present