Hashara Kumarasinghe

COMPUTER SCIENCE AND ENGINEERING UNDERGRADUATE

As a Computer Science and Engineering undergraduate from the University of Moratuwa, I have worked on web-based projects, mobile applications, and machine learning-related projects. I have done my internship at CodeGen International(Pvt) Ltd. I am currently working on the final year project, a chest x-ray analysis framework that can be used for Pneumonia and COVID-19 diagnosis using deep learning techniques.

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🌐 https://hashara.github.io/

WORK EXPERIENCE

**CODEGEN INTERNATIONAL (PVT) LTD
(OCTOBER 2020 - MARCH 2021)**

SOFTWARE ENGINEERING INTERN

- Implemented LDAP authentication for a project using Spring Boot
- Implemented database connections for MYSQL and Oracle databases
- Enhancements for the existing functionalities for bath user interface and backend level
- Implemented a dashboard using Oracle APEX
- Bug fixing

EDUCATIONAL HISTORY

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF MORATUWA
(AUG 2017 - 2022)**

BSC ENG HONS

CURRENT GPA: 3.58

**SPARK X PROFESSIONAL DEVELOPMENT PROGRAM
SPARK ACADEMY, SRI LANKA
(MAR 2021 – SEP 2021)**

SKILLS SUMMARY

- Programming Languages
  - Java
  - Python
  - JavaScript
- Web Development
  - Node js
  - Html
  - AngulerJs
  - PHP
  - Bootstrap
  - Spring Boot
  - Oracle APEX
  - ReactJs
  - WordPress
- Mobile Development
  - Flutter
- Database
  - MySQL
  - PostgreSQL
  - Firestore
- Cloud
  - Google Cloud Platform
  - Azure
- Machine Learning
- Computer vision

ACHIEVEMENTS

- **BEST TEAM PROCESS**
  Code with WIE: hackathon organized by IEEE WIE Sri Lanka Section
- **WINNER**
  Hackdown2020: inter-university coding competition organized by the IEEE WIE Student Affinity Branch of UOM
- **MORAXTEREME**
  12 hours programming competition organized by University of Moratuwa
  - RANK: 14
    MoraXtreme 5.0
  - RANK: 14
    MoraXtreme 4.0
  - RANK: 63
    MoraXtreme 3.0
- **IEEEXTREME**
  24 hours programming competition organized by IEEE
  - GLOBAL RANK: 274
    IEEEXtreme 14.0
  - GLOBAL RANK: 464
    IEEEXtreme 13.0
  - GLOBAL RANK: 495
    IEEEXtreme 12.0

RELEVANT COURSEWORK

- Machine Learning
- Distributed System
- Concurrent Programming
- Data Structures and Algorithms
- Computer Vision
- Database System
- Principles of Object Oriented Programming
- Object Oriented Software Development

PROJECTS

Multi-Model Radiography Analysis Framework for Pneumonia and COVID-19
Ongoing | Research and Development Project
View more details

- **Technologies** - Python, Tensorflow, Machine Learning, Computer Vision, Convolutional Neural Network
- **Description** - A chest x-ray analysis framework can be used for Pneumonia and COVID-19 diagnosis
- **Publications -** S. Kolonne, H. Kumarasinghe, C. Fernando, D. Meedeniya, MobileNetV2 Based Chest X-Rays Classification, International Conference on Decision Aid Sciences and Application (DASA), Bahrain, 2021, pp. , DOI: (pdf)

Distributed Chat System
Semester 7 | Distributed System Project
View source code

- **Technologies** - Java
- **Description** -A distributed chat application where clients can connect and join/ create/delete/leave rooms, and chat. We have used bully election algorithm for leader election and for detecting failures we have used heartbeat.
- **My Role** - I developed client requests for deleting room, room list, moving from a room, and joining for another room. Also done part of the bully algorithm.

Pump it Up: Data Mining the Water Table
Semester 7 | Distributed System Project
View source code

- **Technologies** - Python, Machine Learning
- **Description** - An individual project for implementing a solution for Pump it Up: Data Mining the Water Table competition in DrivenData. Followed pre-processing, encoding, feature engineering and used models like the Random Forest, Decision Tree, Gradient Boosting Classifier, XGBoost, and MLP Classifier

NCMS - WAKANDA
Individual Project | SparkX
View backend source code | *View frontend source code*

- **Technologies** - Java, React, React-redux, PostgreSQL
- **Description** - A COVID management tool that has authentication, bed reservation, COVID statistic review. This applications' REST API was built using JAVA Servlet, the UI was built using React with React-redux, and PostgreSQL was used as the database.

Online Bus Booking System
Semester 5 | Software Engineering Project
View source code

- **Technologies** - NodeJs , Firebase
- **Description** - A system for online bus booking which contains a web application and two mobile applications with REST API as the backend
- **My Role** - I developed the REST API by using NodeJs with Express and designed the database (firestore) of the system.

EXTRA-CURRICULAR	REFEREES
Webmaster - IEEE Student Branch of University of Moratuwa 20/21 **Webmaster -** Women in Engineering Symposium 2020 and 2021 Developed a website for International Women in Engineering Symposium using WordPress. **Committee member -** IEEE SLSYW Congress 2020	