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SKILLS

Languages: Java, Kotlin, C++, C#, SQL, Shell, HTML, CSS
Tools: AWS, GCP, Jira, Docker, Kubernetes, Tableau, Power BI, Jenkins, Git, Excel
Databases: MySQL, MS SQL, Postgres, Firebase
Libraries: Retrofit, RxJava, Jetpack Compose
Certificates: Obtained Machine Learning Foundations and Cloud Foundations certificates on AWS ([Link](#))

EDUCATION

Master of Engineering in Computer Engineering September 2023 - September 2024 (Expected)
University of Waterloo
Bachelor of Technology in Information Technology December 2020 - May 2023
Dharmsinh Desai University
Diploma of Engineering in Computer Engineering August 2017 - November 2020
Government Polytechnic Ahmedabad

RELEVANT COURSEWORK

- Mobile Application Development
- Database Systems
- Cloud Computing
- Operating Systems
- Data Structures and Algorithms
- Computer Networks
- Software Development Life Cycle
- Algorithm Design and Analysis

RELEVANT EXPERIENCE

Project Intern, Institute for Plasma Research December 2022 – March 2023

- Monitored 4 new functionalities post driver code updates to optimize IOC performance, spearheaded collaboration within a team of 3 scientists to integrate the EPICS framework for a LIGO project.
- Debugged and resolved numerous errors encountered during the configuration of the EPICS (Experimental Physics and Industrial Control System) framework on the Linux platform, ensuring seamless integration and functionality.
- Utilized Notion to efficiently keep track of progress across all project phases, documenting comprehensive reports detailing 25+ requirements, design specifications, and implementation details.

PROJECTS

Hybridclass - Android Application, Dharmsinh Desai University ([GitHub](#)) – ([Video](#))

- Engineered a Java application utilizing REST APIs for data exchange to facilitate in-class activities such as attendance tracking via QR codes, material sharing through Firebase with Firestore, and quiz through sessions for professors.
- Designed 20+ visually appealing and user-friendly Android interfaces using Jetpack Compose, employing object-oriented design techniques and XML to craft intuitive and modern user experiences.
- Implemented secure authentication using Firebase Realtime Database and applied comprehensive validation to all application controls, ensuring data integrity. Over 200 students and professors have used it so far!

Spotify Music Discovery - Database/ML Project, University of Waterloo ([GitHub](#)) – ([Video](#))

- Programmed Streamlit using Python and Spotify Web API to create an intuitive web interface, enabling users to receive personalized music recommendations using 2 different models based on the listening habits.
- Optimized data retrieval by defining indexes on 10+ critical database columns and crafted 5+ efficient view queries to fetch and format required information, improving application performance by 71%.
- Modelled Spotify database in MySQL from scratch with over 1 million songs loaded, and developed a music recommender system for up to 4 users leveraging content-based filtering and cosine similarity techniques.

Development of interfaces using EPICS - Research Project, Institute for Plasma Research ([Report](#))

- Streamlined Qt/Qwt, Docker, and SQL to enhance data interface design, containerization, and database management efficiency by 20%, while activating IOCs with Perl and bash scripts on CentOS/Debian Linux OS.
- Leveraged Archiver Appliance to fetch and monitor process variables from 5+ vacuum gauges and particle accelerators via SQL, enabling real-time analysis of 1000+ data points.
- Revamped makefiles and deployed the EPICS (Experimental Physics and Industrial Control System) framework on Debian Linux, ensuring optimal performance and system stability through rigorous fine-tuning.