Simardeep Singh

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WORK EXPERIENCE

Backend Developer Co-op, NCR Voyix, Waterloo   January 2024 – August 2024
- Integrated new capabilities into microservices framework using **Java Spring Boot, Kubernetes, PostgreSQL** and **Maven**.
- Leveraged **GCP**, **Git** and **Jenkins** for CI/CD, streamlining the development & deployment process, eliminating 98% manual errors.
- Engineered **RESTful APIs** with **YML**, **Java Spring Boot** within a **microservice** making it easier to modify or add new endpoints.
- Automated backend API and frontend testing using **Gherkin** and **java,** ensuring 100% bug-free feature delivery to the bank client.
- Orchestrated **Docker** images to the **Kubernetes** cluster, facilitating seamless deployment of microservices.
- Coordinated with both onshore and offshore **cross-functional teams** for smooth feature development and delivery to the bank clients.

Teaching Assistant, CIS*2520 - Data Structures, University of Guelph   September 2023 – December 2023
- Led data structures lab sessions and office hours for more than 250 students, resolving 95% student inquiries in C and Git.

Bioinformatician Co-op, Norgen Biotek Corp., Thorold, ON   May 2023 – August 2023
- Earned **Outstanding Evaluation** for performing and completing tasks beyond assigned responsibilities.
- Developed containerization of vital bioinformatics pipelines using **Docker** in **Linux**, ensuring reproducibility & scalability.
- Optimized pipelines and scripts in **Python, R, & Bash**, making scripts efficient by 60% in analyzing complex RNA and DNA data.
- Automated pipeline processes with Unix scripts in Bash, increasing processing speed by 50%.

Software Test Co-op, Intellijoint Surgical, Kitchener, ON   September 2022 – December 2022
- Designed and executed **manual and automated** software test plans**,** reducing the time spent on testing by 70%.

Software Developer Co-op, Camis Inc., Guelph, ON   May 2022 – September 2022
- Engineered a major feature, Rental Dashboard, for Camis application with team, improving rental tracking efficiency by 60%.

PERSONAL PROJECTS

EduGraph (Project)   Sept 2023 – Nov 2023
- Created a web application. Parsed the data into csv using python, developed a **Python**-based CLI and Excel UI using **VBA.**
- Stored the data in a **MySQL** database and architect the **PHP** REST APIs, featuring **PHP** web applications for course recommendations, prerequisite graphs, hosted using **Nginx** and a **CI/CD** pipeline for enhanced functionality and reliability.

Weapon Detection System (Project) (Detail Report)   November 2023
- Developed a robust weapon detection and classification system using advanced Machine Learning techniques.
- Development of two identifiers, Feed Forward Neural Network, YOLOv8, using **Python**, including Keras, OpenCV, model optimization using 5 - fold cross validation and training over 7000+ images.

GryphHub (Project) (Demo)   March 2023
- Built a university website using **Java object-oriented programming** (OOP) concepts.
- Constructed use case diagrams, class diagram, entity diagram and sequence diagram for efficient planning.

ePortfolio (Project) (Demo)   November 2021
- Created a user-friendly GUI application for investment portfolio management, implementing **OOP** in **Java,** Swing and AWT**.**

COVID-19 Statistical Data Analyzer (Project)   March 2021
- Leveraged **Python** libraries to process, analyze, and visualize COVID-19 data and related datasets from web.

TECHNICAL SKILLS

Languages: C, Java, Python, Bash
Frameworks: Spring Boot, PyTorch, YOLOv8, Scikit-learn, Keras Matplotlib, Seaborn, Pandas
Tools: Docker, Git, Unix/Linux, Maven, Tableau, Kubernetes, Google Cloud Platform (GCP), Jenkins, Postman
Database: PostgreSQL, MySQL
Others: Microservices Architecture, RESTful APIs, Object-Oriented Design, Data Structures and Algorithms, Distributed Systems, multi-tiered systems, Containerization, Operating System, Multithreading, Relational Database, BigQuery, knowledge graphs (or semantic network)
Soft Skills: Adapt and learn new skills or technologies efficiently, passionate about new technology and open-source development

EDUCATION

Bachelor of Computing, Software Engineering, University of Guelph, Guelph, ON   September 2020 – September 2024
- **Courses:** Database Management, Data Structure, Object-oriented programming, Analysis & Design of Computational Algorithms, Software System Development & Integration, System Analysis & Design in Application, BigQuery for Data Analysts by Google Cloud