Arjot Singh Rai

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EDUCATION

- **University of Saskatchewan** — Saskatoon, SK, Canada
  Bachelors of Science Honours in Computer Science — *09/2018 - 04/2023*

EXPERIENCE

- **Calian Advanced Technologies** — Saskatoon, SK
  Junior Software Developer, 05/2023 - Present
  - Develop a highly-available distributed full-stack web and desktop applications with JavaScript, TypeScript, Python, Java, C++, C#, PostgreSQL and Couchbase, achieving over 99.99% uptime and enhancing the product's reliability and customer satisfaction.
  - Write and maintain Ansible playbooks to automate and streamline deployment processes, ensuring consistent and efficient application releases.
  - Architect and optimize database structures using SQL and NoSQL databases like PostgreSQL and Couchbase, improving data retrieval speeds by 30%.
  - Develop and execute robust manual and automated testing using Selenium and Robot Framework, achieving over 90% test coverage and significantly improving software quality and reliability.
  - Participate in the requirements analysis, detailed design, software development, testing, documentation, integration, and deployment of software.
  - Lead Scrum stand-ups and sprint planning in an Agile team, ensuring timely and high-quality releases.
  - Mentor and guide new interns and entry level developers, fostering a collaborative and knowledge-sharing environment.

  Software Developer Intern, 05/2021 - 04/2023
  - Assisted in the development of highly available web and desktop applications with JavaScript, Python, Java, C++ and PostgreSQL.
  - Collaborated with team members to implement automated testing scripts, gaining hands-on experience with Selenium and enhancing testing efficiency.
  - Designed, implemented, and automated GitLab CI/CD pipelines for efficient application releases.

- **University of Saskatchewan** — Saskatoon, SK
  Teaching Assistant, 09/2022 - 12/2022
  - Facilitated over 20 labs and help desk sessions on Linux and C programming for 100+ students.
  - Improved student understanding through clear and concise explanations, enhancing understanding of complex concepts.

RESEARCH AND PROJECTS

- **Wash Card Tracking Android Application**: Developed an Android app using Java and SQLite to track wash card usage for a prominent gas station, implementing secure data storage to prevent exploitation of the complimentary car wash policy.
- **Flower Counting Application**: Developed a python script using PyTorch and TensorFlow to estimate Canola crop yields to improve agricultural planning accuracy.
- **Exploration of Interference Issues in Sub-GHz Technologies**: Conducted and authored a research paper on the interference effects between LoRaWAN and Wi-Fi Halow networking technologies, utilizing simulation tools to provide valuable insights to the field.

PROGRAMMING SKILLS

- **Languages**: Python, JavaScript, TypeScript, C, C++, C#, Java, SQL, PHP
- **Technologies**: Docker, ReactJS, NodeJS, NextJS, Kubernetes, Gradle, Git, Graylog, WebPack, Flask, Couchbase, CI/CD, AWS, GIS, .NET, HTML, CSS, Jira, Confluence, Android Development, Ansible