

Kailash Khadka

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Professional Summary

Robotics Software Engineer with 3+ years of backend development experience and a solid foundation in electrical and computer engineering. Recognized for strong problem-solving, adaptability, and the ability to collaborate across diverse teams to drive projects from concept to implementation. Skilled at learning quickly, thriving in fast-paced settings, and contributing to efficient, reliable, and user-focused outcomes.

Highlight of Qualifications

- Strong problem-solving and analytical skills, with proven ability to troubleshoot complex issues and develop effective solutions
- Excellent communication skills, experienced in explaining technical concepts clearly to both technical and non-technical audiences
- Skilled collaborator with experience working in Agile teams, contributing to sprints, standups, retrospectives, and cross-functional projects
- Highly adaptable and quick to learn new tools, systems, and processes in fast-paced environments
- Detail-oriented with strong organizational skills, ensuring accuracy, reliability, and efficiency in project execution
- Demonstrated leadership through mentoring, code reviews, and collaborative teamwork

Technical Skills

- **Robotics:** ROS/ROS2, Gazebo, Rviz, URDF, TF2, MoveIt2, Nav2, ROSBridge, DDS, LiDAR
- **Programming Languages:** Python, C++, Java
- **DevOps and Cloud:** Git, Jenkins, Docker, Ubuntu, Bash, AWS, EC2, Lambda, S3, Secret Manager
- **Machine Learning & Computer Vision:** Model training, Classification, Applying CV in robotics
- **Robotics Hands-On:** Robotnik RB-1, Husarion RosbotXL, Clearpath's TurtleBot-3, Universal Robot's UR3e, RigBetel Labs' Tortoisebot, Ardupilot Quadcopter with Raspberrypi 4
- **Hardware & Systems:** PLCs, Relays, Electromechanical systems, Pneumatic Systems, Switches

Work History.

Software Engineer

Dec 2021 - Aug 2024

National Bank of Canada, Toronto, ON.

- Designed and developed a Counterparty Onboarding & Account Creation utility using Python, Bash, AWS, and Kafka, enhancing data preprocessing processes analogous to sensor data calibration
- Engineered Bash scripts for automating file decompression and orchestrating processing workflows, showcasing strong programming and problem-solving skills relevant to managing sensor data pipelines
- Implemented automated infrastructure provisioning using Jenkins to maintain scalable and reliable system environments like distributed systems in robotics

Application Developer

Aug 2021 - Dec 2021

CIBC, Toronto, ON.

- Refactored the Alert Ingestor application from Java to Scala, optimizing large-scale data processing with Apache Spark and demonstrating skills applicable to managing complex map data and distributed systems
- Maintained clean, reusable code using Git and GitFlow, underscoring strong version control practices and commitment to reliable software development

Educational Background

Master of Engineering, Electrical and Computer Engineering

Sep 2019 - Jul 2021

University of Waterloo, Waterloo, ON.

- Achievements: Specialization in AI and ML

Bachelor of Engineering, Electronics and Computer Engineering

Jul 2006 - Jul 2010

Tribhuvan University, Kathmandu, Nepal

Robotics Certification & Training

Robotics Developer - The Construct

Jun 2025