

# Prashanna Rai

SOFTWARE ENGINEER

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“Be the change that you want to see in the world.”

## Summary

- more than Two years of professional experience as a Software Engineer in Java programming, React and DevOps Engineer
- more than 3 months Experience as a Test Automation Engineer at knightec, Solna
- 6 months Experience as a Quality Assurance Engineer at Xensam, Stockholm.
- Microsoft Certification Exam 409 (01/2014) - Server Virtualization with Windows Server Hyper-V and System Center

## Skills

<b>DevOps</b>	AWS, Docker, Jenkins, Ansible, Grafana, Prometheus, VMware, OpenStack, Cloud-init, AWS S3, Kubernetes
<b>Backend</b>	JPA/Hibernate, Spring Boot, QueryDsl, JMS, JUnit, Mockito, JMock, PySpark
<b>Big Data analytics</b>	Hadoop, Spark, Apache Pulsar, MongoDB
<b>Test Automation Framework</b>	Playwright
<b>Authorization framework</b>	Open Policy Agent, Keycloak
<b>Frontend</b>	React, Typescript
<b>Programming</b>	Java8, JavaScript, Python, C++, C, GIT, Erlang
<b>Languages</b>	English, Nepali, Hindi

## Achievements

- 2018 **Awarded for Best Technical Solution**, Winner of Openhack Stockholm *Stockholm, Sweden*
- 2018 **Awarded for hard work and dedication from Fusemachines Nepal**, Token of Appreciation *Kathmandu, Nepal*

## Work Experience

- Brokerway AB** *Stockholm, Sweden*  
FULL STACK DEVELOPER *Aug. 2023 - Present*
  - my worked involved with developing STX product which handles post-trade processes like clearing, settlement, and corporate actions. The backend application involves Java programming and the frontend application involves Angular single-page web application framework.
- Ericsson** *Kista, Sweden*  
THESIS STUDENT *Jan. 2023 - July 2023*
  - Master Thesis - Cloud-Native Authorization
  - The thesis investigates the benefit of OPA over a specialized policy engine to existing cloud-native applications named EMC and OMC running in a private cloud.
  - It was observed that there was almost small difference in latency i.e 1.109 times slower in latency when service was integrated with OPA as SideCar. But in the case of fine-grained authorization, as data grows, Wasm-based system integration performs well i.e 1.30 times faster than the existing authorization system.
  - The thesis project involves Kubernetes, Open Policy agent, and some Java Security and Python Security programming, threat modeling when integrating with OPA with existing service.
  - link to my presentation can be found here
- Uppsala University** *Uppsala, Sweden*  
TEACHING ASSISTANT *Jan. 2023 - Apr 2023*
  - participation in labs and tutorials/lessons of Hadoop, Spark, and Openstack, grading of assignments, answering student's questions, and supervision of student projects in the Data Engineering course.
- Dewire by Knightec** *Solna, Sweden*  
SOFTWARE ENGINEER *Oct. 2022 - present*
  - Part time employee
  - maintaining React project
  - Test automation of React application using Playwright. The application is a service portal for Boule's hematology analyzer BM-850 and eventually the newer BM-900 model.

## Dewire by Knightec

ASSOCIATE ENGINEER

- Summer Job
- maintaining Angular project
- Unit-testing and Integration testing of Spring boot Application. The application is service gateway to integrate Telia numbers to Microsoft teams
- writing Fullstack application to unified view of swagger of microservices

Sundsvall, Sweden

Jun. 2022 - Aug. 2022

## Xensam

REMOTE SOFTWARE CONSULTANT (QUALITY ASSURANCE ENGINEER)

- Working as QA including writing unit tests, manual testing
- Spinning up testing environments with HyperV, KVM, Active Directory Domain controller
- Test data management with open source AD-lab generator

Stockholm, Sweden

Mar. 2020 - Jun. 2020

## Xensam

QUALITY ASSURANCE ENGINEER AND TESTER

- Designing a test strategy/test plan.
- Test software solutions with Sentry during product development.
- Reporting software defects and work with development team to resolve them.
- Documenting and communicating findings and software quality improvements.

Stockholm, Sweden

Aug. 2019 - Sep. 2019

## Fusemachines

SOFTWARE ENGINEER (DEVOPS ENGINEER)

- Provisioned an easily managable Amazon AWS infrastructure utilizing IaC(Infrastructure as Code) tools like Ansible.
- Built fully automated CI/CD pipelines on Jenkins for containerized applications using Docker.
- Customize Dockerfile of Jupyterhub notebook (Python IDE on cloud) to allow multi-user collaboration.
- Automate deployment of Linux applications and system configurations.
- Collaborating with developers to make sure new environments meet requirements and conform to best practices.
- Deployed a centralized monitoring environment(Grafana, InfluxDB, CollectD) which gather system metrics as well as docker run-time metrics.

Kathmandu, Nepal

Jan. 2018 - Aug. 2018

## Fusemachines

SOFTWARE ENGINEER (JAVA DEVELOPER)

- Implemented RESTful API server for finding Vehicle compatibility with OBD device.
- Data import and export to database.
- Unit and integration tests.
- Reviewing and resolving issues and software bugs.
- Documentation.

Kathmandu, Nepal

Aug. 2016 - Dec. 2017

## Education

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### Uppsala University

MASTER PROGRAMME IN COMPUTER SCIENCE

Uppsala, Sweden

Expected date - June, 2023

### Tribhuvan University

BACHELOR IN COMPUTER ENGINEERING

Kathmandu, Nepal

2011 - 2015

### Hermods

SWEDISH FOR IMMIGRANTS

Aspiring student

Uppsala, Sweden

## Courses

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- Language Abstractions for Concurrent and Parallel Programming - 1DL541
- Introduction to Parallel Programming - 1DL530
- Functional Programming I - 1DL330
- Data Engineering I - 1TD069
- Data Engineering II - 1TD075
- Algorithms and Data Structures II - 1DL231
- Computer-Assisted Image Analysis I - 1TD396
- Modelling for Combinatorial Optimisation - 1DL451
- Low-Level Parallel Programming - 1DL550
- Advanced Computer Architecture - 1DT024
- Software Testing - 1DL610
- Advanced Computer Science Studies in Sweden - 1DT032
- Algorithms and Data Structures I - 1DL210
- Database Design I - 1DL301
- Database Design II - 1DL400
- Advanced Software Design - 1DL242

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References can be provided upon request!