

Bishwa Thapa

Software Engineer

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Skills

Languages

- Professional experience in Python, Golang, Node.js
- Comfortable working with C, C++, Java, and bash

Infrastructure

- Professional experience in containerization and container orchestration with Docker and Kubernetes
- Professional experience working with Jenkins to support development workflows of the entire team
- Experience working with configuration management tools such as Ansible, Terraform, and Helm (for pre-configured Kubernetes applications)

Frameworks

- Professional experience with Django and Django Rest Framework for RESTFUL API development
- Comfortable working with RPC frameworks such as gRPC, web frameworks such as Express.js and, ORM frameworks such as Mongoose

Databases

- Professional experience in sql and nosql databases namely postgresql and mongodb.
- Comfortable working with elasticsearch, kibana, and logstash

Tools

- Experienced working in development team with git-based workflows (git-flow) on Github and Bitbucket
- Extensive experience administering linux-based systems (ubuntu, debian, arch), web-server (nginx), and databases (mysql, mongodb, postgresql)

Experience

Zscaler Inc

SOFTWARE ENGINEER

Since Jul. 2019

California, USA

“Industry leading cloud-based information security provider”

- Working to deliver software-level features of the backend components of “Zscaler Browser Isolation”; A platform that provides users secure access to web-based applications and content by rendering safe pixels to the browser, thus protecting corporate endpoints from security concerns.
- Responsible for designing sophisticated CI pipelines in Jenkins and providing Continuous Delivery by carefully rolling out beta releases or bug-fixes of “Zscaler Browser Isolation” to ensure stability.

Concepts and Technologies: Golang, gRPC, Jenkins, Microservice, Kubernetes, Helm, EKS, ELK.

Vitapio GmbH

SOFTWARE ENGINEER

Jul. 2018 - Jun. 2019

Bremen, Germany

“Early Stage Startup aiming to develop an enterprise solution for recruiting, sourcing and staffing”

- Engineer #1 brought onboard to resume the stalled project developed by offshore development team. Responsible for introducing, defining, and enforcing software development standards, including continuous integration, coding standards, and git-workflow to increase the overall software development efficiency.
- Responsible in moving all of the development activities in-house and designing and developing the backend on more extensible platform to support additional features and target future growth.
- Designed CI pipelines and staging environment on AWS resources such as EC2, RDS, VPC, Route53, ECR - to catch problems early and facilitate early feedback from the stakeholders.

Concepts and Technologies: Python, Django, Django Rest Framework, AWS, Jenkins, Ansible, Docker, PostgreSQL.

Jacobs University Bremen

UNDERGRADUATE RESEARCHER IN SOFTWARE DEFINED NETWORKING(SDN) AND OPEN NETWORK OPERATING SYSTEM(ONOS)

Sep. 2017 - Jun. 2018

Bremen, Germany

“Researched in the sector of SDN, ONOS: A carrier-grade SDN network operating system, and DELTA: A SDN security evaluation framework”

- Researched about Traditional and Software-defined Networking Infrastructure Model, ONOS Network operating Systems and OpenFlow.
- Deployed a virtual network infrastructure to inspect the behaviour of the default Reactive Forwarding Applications shipped with ONOS.
- Implemented *Target Controller and Application Agent(in Java and bash)* for ONOS 1.11 into the DELTA and then conducted penetration testing.
- Uncovered vulnerabilities such as Internal Storage Abuse, Application Eviction, Man-In-The-Middle Attack, and System Command Execution, Packet-In Flooding (and reported them to the ONOS community).

Concepts and Technologies: SDN, ONOS, Reactive Forwarding, Network Prototyping(Mininet), OpenFlow, DELTA Architecture, Penetration Testing with DELTA

“Assisted the Professor in teaching the students enrolled in Big Databases And Cloud Services”

- Tutored the required concepts (Relational model, Relational Database Management Systems, Database normalization, Query processing in SQL and Hadoop) to the enrolled students in a small group setting.
- Assisted the Professor in grading the assignments, midterm and final examination papers.

Concepts: Anatomy of DBMS(Spatial Indexing, Query Processing and Optimisation), Big-data Frameworks(Hadoop, NoSQL)

Personal Projects and OSS Contributions

Django Rest Password Reset

[📦 django-rest-passwordreset](#)

“A simple password reset strategy for Django Rest Framework”

- Fixed various bugs and extended useful development features on upstream project. Fixes included enhanced security validation, Swagger API docs, and API rendering.

Technologies: Python, Django Rest Framework, Password validation, DjangoBrowsable API, Swagger

Django Rest Simple Invite

[📦 drf-simple-invite](#)

“A simple user invitation strategy for Django Rest Framework”

- Conceptualised, and built a DRF package with which users can be invited and verified using invitation tokens.

Technologies: Django Rest Framework, Django SMTP and Signals

Scaffolder

[📦 scaffolder](#)

“TypeScript REST API Scaffolder”

- Designed, and built a depth-first n-ary tree traversal application that generates a scaffold for REST API in TypeScript.

Concepts and Technologies: Node.js, TypeScript, Depth-First Graph Traversal Algorithm

HiDPI awesome-wm

[📦 HiDPI](#)

“Desktop environment tweak for Retina MacBook”

- Developed a tweak for Awesome-WM (on Arch Linux) running on a HiDPI (High Dots Per Inch) display.
- Aimed towards stabilising the erratic behaviour of any software running in a high-resolution display.

Technologies: Arch-Linux, Awesome WM, X Window System, Bash, Lua

Education

Jacobs University Bremen

Bremen, Germany

BACHELORS OF SCIENCE IN COMPUTER SCIENCE

Sep. 2015 - Jun. 2018

- Minor in Intelligent Mobile Systems. Graduated as of June 2018.
- Awarded with entrance scholarship based on a student's academic record.