# Suman Thapa

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## EDUCATION

**Technische Hochschule Ostwestfalen-Lippe**                    Lemgo, Germany
*M.SC. Information Technology*                                  *2024 – Present*

**London Metropolitan University (in collaboration with Islington College)**    Kathmandu, Nepal
*BSc (Hons) Computing (First Class Honours)*                    *2019 – 2022*

## RELEVANT EXPERIENCE

**Innovate Tech**                                              Kathmandu, Nepal
*Associate Backend Developer*                                  *Jan 2023 – Mar 2024*

- Worked on scalable **microservices** to develop features for an digital learning platform *(My Second Teacher)*
- Developed RESTful **APIs** using **Express** and **Koa** frameworks.
- Built real-time chat system using **socket.io** library, enabling features like private messaging, group chat, and user status tracking.
- Utilized **mongoose** library to interact with **MongoDB** NoSQL database, including defining schema models, performing CRUD operations and implementing queries for data retrieval.
- Implemented **Sequelize** ORM model to communicate with **Postgresql**.
- Integarted **AWS** services like **Lambda, SQS, and SNS** to develop de-coupled and reusable application features.
- Conducted in-depth research on **Prosody**, a modern lighweight and extensible XMPP communication server, exploring its features and architecture.

**Vairav Technology**                                          Kathmandu, Nepal
*Full stack software engineer*                                 *May 2022 – Dec 2022*

- Contributed to the development of **Vairav Trident**, an AI-enabled **SIEM** solution with built-in detection capabilities and integrated **threat intelligence**, ensuring comprehensive security visibility and continuous threat mitigation.
- Developed scalable **microservices** that communicate over **gRPC** and **Kafka**.
- Developed **APIs** using **Apollo GraphQL**.
- Managed trigger based **CDC (Change Data Capture) / Audit** on sql databases like **postgresql**.
- Developed an interactive frontend implementing **data visualizations, CRUD operation** and **microservices state management** using **React Js** and **Elastic UI**.
- Implemented test case on previously written code using **cypress**.
- Occasional **automation script** development as per **SIEM** requirements.
- Implemented role based **authentication/authorization middleware** on backend services using **keycloak** as JWT provider.
- Implemented **Prisma ORM** model to communicate with SQL database and designated libraries to communicate with **noSQL databases** like **Elasticsearch**.
- Integrated **session management** on kibana.

**Level 9 Tech**                                               Kathmandu, Nepal
*Backend Developer Intern*                                     *Aug 2021 – Nov 2021*

- Learnt to build applications using Django Rest Framework (DRF) and PostgreSql.
- Developed **RESTful APIs** for learning management system and airlines booking.
- Acquired **unit testing** concepts and performed unit testing on developed APIs.

## SKILLS

**Programming Languages:** TypeScript, JavaScript, Python, SQL.

**Technologies & Frameworks:** Node.js, Express.js, Koa, GraphQL, AWS, REST API, React, ELK stack, MongoDB, Grafana, Git, Docker.

## PROJECTS

**Cricket match prediction using Machine Learning** | *GitHub*
- Developed a machine learning model for forecasting the outcome of a cricket match.
- Used decision tree classifier to develop the predective model with key input features such as match timing, toss winner, venue, and more.

**greenroots (Final Year Project)** | *GitHub*
- A plant based mobile application built using Flutter and Django Rest Framework (DRF).
- Has plant scanning, smart weather check, and water reminder features.
- Allows users to browse and buy plants.
- Implements JWT authentication enhancing user security with essential features, including password recovery, email functionality, and secure logout.

**JWT Authentication API in Express JS** | *GitHub*
- An authentication system APIs for user registration, login, forgot password, change password, and logout.
- Used MongoDB for storing and fetching users data.
- Implemented mail delivering feature using nodemailer package.