

SAFAL RAJ MANANDHAR

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Bhaktapur-10, Nepal, 44800

OBJECTIVE

Currently working as an Associate Software Engineer at Maitri Holdings Services, developing and maintaining software using Python, Typescript and deploy on AWS, seeking opportunities to leverage technical skills and eager to contribute to a collaborative team environment, grow professionally, and apply my knowledge in developing and maintaining software.

TECHNICAL SKILLS

- **Front-End:** HTML, CSS, TypeScript, React, Next.js, Mantine UI, Zustand, Flutter
- **Back-End:** Node.js, Express.js, FastAPI, Django
- **Databases:** PostgreSQL, Microsoft SQL Server
- **DevOps & Cloud:** Docker, Kubernetes, AWS (ECR, Lambda, SNS, S3, Redshift), SAP BTP Kyma
- **Version Control & CI/CD:** Git, GitHub, AWS CodeCommit, Azure DevOps
- **Tools & Others:** Postman, MinIO, RESTful API Development

EXPERIENCE

Associate Software Engineer:

Maitri Holdings Services, Jhamsikhel, Lalitpur

October'24 - Present

- Worked on the following frontend and backend technologies contributing to the projects:
 - Developed backend APIs using Django and FastAPI,
 - Built frontend applications using Next.js with Mantine UI
- Worked on the following Services to deploy the projects:
 - AWS ECR for Docker image management
 - AWS Lambda for serverless compute
 - AWS SNS for event-driven notifications
 - AWS S3 for file storage
 - SAP BTP Kyma for microservices deployment
- Completed SAP S4 HANA certification to be eligible to work with the SAP S4 HANA system

Software Engineering Fellowship in Full-Stack Development:

Leapfrog Technology, Dillibazar, Kathmandu

May'24 - Aug'24

- Front-End
 - Responsive front-end using HTML and CSS(Sass)
 - Developed game(Dungeon Dread) using Typescript and Canvas API
- Database
 - Hands-on experience with PostgreSQL
 - Used Knex for querying in the back-end
- DevOps
 - Deployment on GitHub pages and Netlify
 - Automate Netlify deployment from GitHub workflows
 - Hands-on experience with Docker and Docker Compose
 - Automate Docker image creation from GitHub workflows
- Back-End
 - Integrated RESTful APIs to enable data exchange between front-end and back-end.
 - Followed standard coding practice and folder structuring.
 - Used JSON Web Tokens(JWT) for authentication
 - Developed a TODO application

PROJECTS

AgriLink: Connecting Farmers and Customers Directly [[GitHub-Front-End](#) | [GitHub-Back-End](#)]

- AgriLink is a full-stack web application that connects farmers and customers.
- Developed back-end using Node.js, Express.js
- Developed front-end using vanilla Typescript, HTML, and CSS.

Dungeon Dread [[Demo](#) | [GitHub](#)]

- Dungeon Dread is a survival game where players battle waves of zombies.
- Developed using Canvas API and TypeScript

ARTourCompanion with Voice Assistance: [[Demo](#) | [Report](#)]

- AR navigation to the monuments in Bhaktapur Durbar Square using Mapbox to help tourists navigate to monuments and some popular landmarks
- A voice assistance service where tourists can ask queries about the monuments
- MobileNet-SSD v2 for image detection and CNNs-LSTM model for image classification
- Transformer model for Question answering, Whisper AI for transcribing, and GTTS for speech-to-text conversion

Rice Disease Detection Using CNN-LSTM model(Waapusha): [[Demo](#) | [Github](#) | [Report](#)]

- Developed image classification to classify disease on a leaf model using CNN and LSTM with 95.50% accuracy to help farmers identify disease on paddy leaves and provide information (overview, preventive measures, solutions)
- Used Python for model development (Tensorflow, Keras) and Flutter for mobile application development
- Deployed on an Azure Virtual Machine

Neural Network from Scratch Using NUMPY: [Demo([Regression](#) and [Classification](#))]

- Developed a neural network for regression and classification problems using Numpy, based on the course Calculus for Machine Learning and Data Science
- Deployed on GitHub

RESEARCH PAPER

Paddy Leaf Disease Detection Using CNN-LSTM Model, combining features extracted by VGG16 and VGG19 models on Segmented images, then the features are fed to the LSTM model for image classification, achieving 95% accuracy with certain overfitting. The model can also be used for other classification domains.[[Link to the paper](#)]

ACADEMIC QUALIFICATION

Bachelor of Engineering in Computer Science, Khwopa College of Engineering, Tribhuvan University, Libali, Bhaktapur, Nepal; April'24

CERTIFICATES

- SAP S/4HANA Cloud Public Edition, Sourcing and Procurement(12/2024)
- Scientific Computing and Python for Data Science” by World Quant University with The Data Incubator (06/2020)
- AWS Certified Cloud Practitioner (07/2023 - 07/2026), Validation Number: Z4YKLKEKXE1QQHGZ
- Calculus for Machine Learning and Data Science (02/2024)
- Data Visualization by Kaggle (12/2023)

EXTRACURRICULAR ACTIVITIES

- Vice-President of Leo Club, Kathmandu (LCK_ Rainbow City)
- Volunteered in the Food Donation Program on 'World Food Day' by the Leo Club (10/2022)
- Participated in Rapid Coding Competition - " Mobile App Development for Bhaktapur Tourism" organized by Khowpa College of Engineering in Android App (11/2019)