### Sonam Zangmo

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#### **Education**

## COLLEGE OF SCIENCE AND TECHNOLOGY

Bachelor of Engineering in Software Engineering

Phuentsholing, Bhutan July 2024 – June 2028

## SHARI HIGHER SECONDARY SCHOOL

Bhutan Higher Secondary Education Certificate (BHSEC), Science Stream

Paro, Bhutan December 2023

## **Projects**

### COLLEGE OF SCIENCE AND TECHNOLOGY

**Undergraduate Student** 

Phuentsholing, Bhutan July 2024 – June 2025

#### **DEEP LEARNING & AI**

## **Dzongkha Digit Classification**

- Developed a deep learning model using TensorFlow/Keras to recognize Dzongkha digits, achieving 90% accuracy.
- Deployed the model on Hugging Face for public access, demonstrating scalability and user accessibility.

### **Animal Classification System**

- Trained and fine-tuned 5 AI models (CNN, ResNet) to classify cats, dogs, and birds using custom datasets.
- Optimized hyperparameters, improving model performance by 15% through grid search.

## WEB DEVELOPMENT

#### YouTube-Clone (Full-Stack)

- Led a 3-member team to refactor frontend (Next.js/React) and backend (Node.js/Express.js) code.
- Debugged API integration issues and enhanced rendering speed by 20%, improving user experience.

#### **Lost and Found System**

• Collaborated with a team to design a PostgreSQL database for a campus-wide system, optimizing query speed by 20% through indexing.

#### **Skills & Interests**

#### Technical:

- **Programming Languages:** Python (Primary), JavaScript, SQL
- Deep Learning: TensorFlow, PyTorch, CUDA, NumPy, Pandas, OpenCV, Hugging Face (NLP)
- Web Development:
  - o Frontend: React, Next.js, HTML/CSS, JavaScript
  - o **Backend:** Node.js, Express.js, Flask
- **Databases:** PostgreSQL, MongoDB
- Tools: Git/GitHub, VS Code, Figma, Google Colab, Render

**Language:** English (Fluent), Dzongkha (Native), Tshangla (Conversational)

Interests: AI Research, Computer Vision, Open-Source Contributions, Web Accessibility