

# Prabin Nepal

<https://nepalprabin.github.io>

Email : [nepal.prabinn@gmail.com](mailto:nepal.prabinn@gmail.com)

Mobile : +1-605-202-9258

## EDUCATION

---

- **University of South Dakota** Vermillion, SD  
*Master of Science in Computer Science; GPA: 4.00* *Jan. 2021 – Present*
- **Visvesvaraya Technological University** Bangalore, India  
*Bachelor of Engineering in Computer Science and Engineering; GPA: 8.52 )* *Oct. 2015 – Sept. 2019*

## EXPERIENCE

---

- **University of South Dakota** Vermillion, SD  
*Data Initiative Student Assistant* *Aug 2022 - Present*
  - Designing and deploying data visualizations using Tableau
  - Working with complex SQL queries like JOIN, Data functions, inline functions and sub-queries
  - Creating KPIs using calculated key figures and parameters
  - Creating data visualizations using Box Plots, Whisker Charts, Heatmaps, Pie Charts, Density Charts and Bar Charts
- **Achiever's Group** Kathmandu, Nepal  
*Python Instructor* *Apr 2021 - Dec 2021*
  - Delivered and facilitated course content
  - Led in-class exercises, project time, and participating in lecture discussions
  - Delivered content related to Python, Web development (Django), and Data Analysis
- **Ensemble Matrix** Kathmandu, Nepal  
*Machine Learning Engineer* *Nov 2020 - Dec 2021*
  - Led a small team for data collection and labeling process to make data ready for handwritten text recognition
  - Worked on problems like Logo Detection, Face Verification, Document Wrapping and Handwriting extraction
  - Used convolutional LSTM network to extract handwritten text from images
  - Reproduced research papers and applied research methodology into new use cases
  - Helped financial institutions automate transaction process by using computer vision techniques to verify signatures
  - Did feature engineering, image processing, transfer learning, and fine-tuned the pre-existing model from TensorFlow using inception architecture
  - Research and prototype techniques and algorithms for text detection and image recognition
  - Created backend APIs to make model ready for production environment
- **Bitpoint Pvt. Ltd.** Kathmandu, Nepal  
*Software Engineer* *Nov 2019 - Nov 2020*
  - Created a backend system for medical entrance preparation using Nodejs
  - Used Vuejs to create admin portal that manages all data and users of the application
  - Integrating front-end element with the back-end API requests
  - Integrated payment functionality with different subscription tiers to let users subscribe the application

## PROJECTS

---

### Computer Vision

- Used keras to implement style transfer paper
- Used Pytorch to implement image segmentation on medical data using U-net architecture
- Implemented U-net architecture for image segmentation using Pytorch
- Used YOLOv3 to create custom logo detection model

### Natural Language Processing

- Used BERT to build name entity extraction model
- Used transformers to build text classification, summarization and question answering pipelines
- Packaged model into ONNX format and use it for inference

## PROGRAMMING SKILLS

---

- **Languages:** Python, Javascript
- **Databases:** MySQL, PostgreSQL, MongoDB
- **Libraries:** Pytorch, Keras, Tensorflow, Huggingface Transformers
- **MLOps:** AWS, Docker, DVC, Prefect, Hydra, Github Actions, Model Packaging (ONNX)
- **Web Technologies:** Django, FastAPI, Nodejs, Vuejs