

Ranjai Baidya

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EXPERIENCE

- **Kpro System, Seoul, South Korea**
Researcher / AI Developer 2022/09 - Present
 - **Drone Research and Development:** Research advanced drone technologies and implement those systems as per requirement
 - **AI Research and Development:** Research latest state-of-the-art AI and Deep learning advances in computer vision and drone technology
- **PRML Lab, Gachon University, Seoul, South Korea**
Research Assistant 2020/09 - 2022/08
 - **AI research:** Research on latest state-of-the-art technologies related to time-series forecasting and computer vision
 - **Assignments Grading:** Grading the undergraduate level assignments
- **NIC Asia Bank, Kathmandu, Nepal**
IT Assistant 2019/03 - 2020/09
 - **Oracle Database:** Manage the database of the bank and also generate necessary reports from the database
 - **Core Banking System Software:** Maintain the Core Banking System Software and provide support to the staffs of the bank to use the software
 - **End of the Day Processes:** Creating and maintaining script for the end of the day processes like: interest calculation. Perform end of the day processes like running script, backing up the database.
- **Vianet, Jawalkhel, Nepal**
Jr. Network and Monitoring Executive 2018/08 - 2020/02
 - **Network Management:** Manage the network of the ISP and modify it when necessary
 - **Configuring Network devices:** Configure routers and switches for deployment in the ISP network
 - **Network Monitoring:** Monitoring the ISP network for anomalies and prevent or reduce downtime by taking necessary action

EDUCATION

- **Gachon University** Seongnam, South Korea
Master of Engineering, Department of AI. Software; GPA:4.44/4.5 2020/07 - 2022/08
Thesis Title: Long Sequence Time Series Forecasting Using Spectral ConvMixer Alongside Weak-stationarizing and Non-stationarity Restoring Blocks
- **Kathmandu University** Kavre, Nepal
Bachelors of Engineering, Department of Electrical and Electronics Engineering; GPA:3.23/4 2014/07 - 2018/12
Thesis Title: A Study to Minimize the Effects of Blackhole Attack in Mobile Ad-Hoc Networks

SKILLS SUMMARY

- **Programming Languages:** Python, C, C++, Matlab, SQL
- **Frameworks:** Pytorch, Keras, TensorFlow, OpenCV, Scikit Learn, Dronekit, Pymavlink, Numpy, Pandas, Matplotlib, Cx-Freeze
- **Tools:** Docker, GIT, Slack, Toad, Ardupilot: Mission Planner, QGround Control, Qt Designer
- **Platforms:** Linux, Windows, Nvidia Jetson, Arduino, Raspberry
- **Languages:** Nepali(Native), English(TOEFL:109), Korean(Beginner), Hindi(Fluent Spoken), Newari(Native)
- **Others:** Microsoft Office, Latex

PROJECTS

- **Drone Precision Landing System:** Design and implementation of computer vision based precision landing system for drone of 100 Kg weight, using a Jetson board. (2022/06 - Present)
- **Time Series Forecasting:** Research and design of a time series forecasting model using deep learning. (2021/07 - 2022/06)
- **Golf Ball Tracking:** Utilizing computer vision technique to track a golf ball and draw its trajectory. (2020/09 - 2021/06)
- **Health and Position Tracker:** Design and implementation of a device that constantly monitors pulse rate and body temperature of the user and notifies concerned person if any unusual behavior is seen. (2016/07 - 2017/06)

PUBLICATIONS

- **Baidya, Ranjai, and Heon Jeong.:** "YOLOv5 with ConvMixer Prediction Heads for Precise Object Detection in Drone Imagery." *Sensors* 22.21 (2022): 8424.

HONORS AND AWARDS

- Excellent paper among papers (oral) - 2020 Korean Society for Next Generation Computing Spring Conference (2022/05/20)
- Excellent paper among papers (posters) - 2021 Korean Society for Next Generation Computing Spring Conference (2021/05/15)