Bibek K C

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Summary

I'm Bibek from Nepal. I am interested in technology-oriented activities that use new technologies like AI tools to solve any existing societal problems. With my 2 years of experience in diverse hands-on projects and my enthusiasm for continuous learning, I am always committed to pursuing new and challenging opportunities. I am currently working as an MLOps Engineer. For a quick and easy way to get information about me, try chatting with my chatbot.

Experiences

MLOps Engineer *Artificial Language Intelligence (ALI Co. Ltd), Korea*
Aug 2023 - Present

My role involves researching, developing and demonstrating POCs for building scalable AI services:

- Designing and optimizing training pipelines, including tracking metrics, monitoring progress, and automated hyperparameter tuning.
- Implementing data versioning and model versioning within local registries.
- Developing scalable machine learning serving pipelines, including model inference, model explainability, service integration and maintenance.
- Implementing CI/CD for MLOps.

Research Intern *Robust Intelligence & Robotics Lab, KAIST*
Jul 2022 - Dec 2022 (6 months)

- For a single moving camera setup, developed a combined framework for realtime 6DoF Pose Estimation and Scene Graph Generation (SGG) in Robotic Manipulation Task using Cosypose framework for 6DoF pose and Neural-Motif framework for SGG and performed experiments on custom cup datasets. [Demo]
- For 2 fixed cameras setup, developed a probabilistic multi-view object-pose estimation framework that (i) associates multiple estimation results with scene graphs, (ii) combines pose distributions from singleview based estimators, and (iii) constructs a unified scene graph by predicting a unified pose distribution per object using MC dropout. More details in draft-paper.

Backend Developer Intern *Bisonai, Seoul*
Jan 2022 - Feb 2022 (2 months)

- Built data pipelines (DAGs) in Airflow to collect DeFi data from various sources like Uniswap, Coingecko and stored them in MongoDB Atlas.
- Implemented backend API server using FastAPI and Strawberry (Python GraphQL Library).

Data Visualization Project Intern *Interactive Computing Lab, KAIST*
Jul 2021 - Aug 2021 (2 months)

- Made a course material for Data Visualization class, i.e., a simple tutorials for visualizing plots with Vegalite and D3.js in Observable notebook for beginners to learn Data Visualization techniques.

Projects: Refer portfolio_bibek for more details and other projects

- **MBTI Prediction:** In Qualcomm-KAIST Innovation Awards-Hackathon 2023, I proposed a hierarchial classifier based approach with 4 KoBert and 4 SVM models with techniques like data augmentation, feature-engineering and adaptive fine-tuning. I was 3rd in phase-2 private leadership ranking. More details in qia-presentation.

- **B-Bot and BGPT:** B-Bot uses an MLP classifier to classify the intent of the user's question and respond with predefined answers. BGPT performs a semantic similarity check between the user's question and the probable answers. The answer with the highest similarity score is chosen, and it, along with the question and the appropriate prompt, is passed to LaMini-Flan-T5-783M, which generates the response.
- **AI-empowered F1/10 Autonomous Racing Car:** I set up the environment and internet on the Jetson Xavier NX, including installing libraries and ROS packages for sensor interfaces. My part was perceptron, specifically object (traffic-light) detection. I used Yolact_ros. Later, due to computational issues, I used a simple rule-based classifier that involved cropping, masking, and counting the pixel values of red, green, and yellow based on certain threesholds and return the color with maximum counts.

Education

Korea Advanced Institute of Science and Technology (KAIST) *Sep 2019 - Aug 2023*
Bachelors, Double Major in Electrical Engineering and Computer Science, Courses-taken

British Model College (BMC) *July 2015 - June 2017*
*GCE A Levels, 4A*s in Chemistry, Biology, Physics, Mathematics*

Skills

Python, Docker, Kubernetes, Linux, MLflow, Kubeflow, SeldonCore, Git, DVC, Jenkins, ArgoCD, Robot Operating System (ROS), Computer Vision, Natural Language Processing, Public Speaking, Team Player

Awards

KAIPlus+ Scholarship Award	KAIST, Apr 2023
Social Innovation Award	Tsinghua University, Jul 2021
Inclusive Leadership	Common Purpose, 2021
KAIST International Student Scholarship	KAIST, 2019-2023
Best student of the batch 2015/2017	The British College, 2017
Country Topper in AS Level Chemistry	University of Cambridge, Nov 2016
2nd Position in Inter-School Olympiad	Budhanilkantha School, 2016

Other Experiences

- Hackathon experiences include Techstars Startup Weekend Busan 2022, where we proposed data-driven predictions for optimal daily customer numbers in restaurants, and Junction Asia 2022, where we proposed a second-hand market in the metaverse, providing users with a new experience.
- Student Assistant in International Scholar and Student Services (ISSS) team at KAIST from Spring 2023
- International Community Representative of Nepal for Spring 2020, Spring 2021, Fall 2021, Spring 2022 and Fall 2022
- Mentor of new international students for Fall 2020, Spring 2021, Fall 2021 and Spring 2022
- Attended Global Summer School 2021, AI and Sustainable Development Goals in Tsinghua University
- Teacher Assistant in British Model College from July 2017 to May 2018