

# Bibek K C



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## Summary

Hello! I'm Bibek from Nepal. I am a Full-Stack AI Engineer, who enjoy the journey of end-to-end product development, and I'm always on the hunt for a better, simpler way to design and ship applications, whether it's backend services or user-facing products.

If your job description has high semantic similarity with my **general\_skill\_corpus**, feel free to be in touch.

**general\_skill\_corpus** =  $\left[ \begin{array}{l} \text{"managing largescale project backends with effective architecture",} \\ \text{"delivering easy-to-use Python libraries and granular APIs",} \\ \text{"creating intuitive frontends and UX interactions following Agile practices",} \\ \text{"handling API gateways for SaaS platforms and setting up reverse proxies",} \\ \text{"containerizing and deploying applications or executables across different OS",} \\ \text{"swiftly experimenting with the latest frameworks, regardless of the field"} \end{array} \right]$

I'm a firm believer in my mantra, *"If they can Do it, I can Do it"*.

Want to know more about me? Feel free to chat with my assistant chatbot at <https://kc-bibek.com.np>.

## Experiences

### AI Researcher, On-device Team Lead

*NeoALI Co. Ltd, Korea*

*Aug 2023 - Present*

- Maintainer of on-device AI Writing Assistant App and develop a cross-editor Writing Assistant Plugin App that will soon be launched as a B2C product (Built on top of my weekend project [B-Assist](#))
- Prepare and obfuscate executables for Python and Javascript applications to run on Windows and macOS
- Develop a simple, scalable architecture for on-device apps, including Windows installers (Inno Setup), authentication/authorization, download services, and a web extension of the desktop app, supported by a distributed Celery queue for high concurrency and stability
- Serve SLM models using vLLM (on-premise) or Ollama (on-device), and use OpenVINO, Torch-MPS, or Torch-CUDA for other neural models
- Maintainer of ALIParse (in-house python library) that provides easy access to layout analysis modules, independent of document types and extends to provide granular APIs for RAG service
- Develop CoDino-based document Layout Detector (306M), labels: [text, title, list, figure, table]  
Two versions: fast (TensorRT-10FPS in T4GPU) vs slow (Openvino-1FPS in CPU) for BATCH\_SIZE=1
- Develop layout ranker for natural reading order of detected blocks and rule-based fast-header detector for selectable PDFs
- Demo Videos: [SamuGen-Plugin](#), [Layout-Detector](#), [Document-Parser](#), [Document-RAG](#), [Form-Extraction](#)

### 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

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- **B-Assist:** Better-Assistant for daily tasks related to text using local AI. *Demo Video:* [B-Assist](#)
- **Website Maintenance:** Managing bintechint.com, a startup providing tech products in Nepal.
- **Renameify:** Developed an automated file renaming application that renames PDF files using its content. This is useful for accountants dealing with a large number of random filenames. *Demo:* [ReNameify](#)
- **FastRAG:** A production-ready RAG app optimized to run on normal-grade PCs. *Repo:* [FastRAG](#)

## Education

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### 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

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Linux, Git, Python, Pytorch, JavaScript, React, NextJs, Electron, Docker, Docker Compose, Gradio, Vllm, Ollama, OpenVino, FastAPI, Express, Nginx, PyInstaller, GoogleCloud, Public Speaking, Team Player

## Awards

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Intel AI PC Innovation Challenge - First Place	NeoALI, January 2025
AI Grand Challenge, IITP - Fifth Place	NeoALI, 2023
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

## Other Experiences

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- 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