Gaurab Baral

+1 9592826255 | gaurabusa@gmail.com | baralg1@nku.edu | tempgaurab.github.io/my/

EDUCATION

Northern Kentucky University — Aug. 2022 – Present
Undergraduate in Data Science, Minoring in Statistics and Biological Science — *Highland Heights, KY*

- **Relevant Courses:** Calculus, Advanced Statistics, Data Mining in Python, Data Cleaning and Visualization, Regression Analysis, Artificial Intelligence, Statistical Computing, Big Data
- **Awards/Honors:** L.I.F.E Fellowship, International Merit Scholarship, President's Honor List
- **Organizations:** Data Science Club(President), COI Ambassadors, STEM Peer Mentor, ACM NKU

EXPERIENCE

Statistical Consultant — Aug 2025 – Present
Burkardt Consulting Center — *Highland Heights, KY*

- Conducted statistical analyses (Regression, ANOVA, Hypothesis Testing) to uncover patterns and support decision-making.
- Developed reports and dashboards to deliver actionable insights for DNP projects, ensuring data accuracy and timely feedback.

Undergraduate Research Fellow — May 2023 – Present
Northern Kentucky University — *Highland Heights, KY*

- Published research on Recommendation Systems (ICMI 2025), Drowsiness Detection (ICMI 2025, AIBThings 2025), Complex Regression Analysis (AHFE 2024, ICCIDA 2025), and Job Market Analysis (KCFC 2024).
- Presented 2 times at Kentucky Capitol Poster Celebration and 3 times on NKU Research Celebration events.

Data Science Intern — May 2025 - August 2025
Re-Assist — *Remote*

- Used OpenCV and AWS Textract to extract fields from scanned medical forms; applied Google Gemini to understand and fill the fields intelligently.
- Built a FastAPI-based PDF auto-filler in Python; packaged with Docker and deployed serverlessly using AWS EC2.

Teaching Assistant — Jan. 2023 – Jan. 2025
College of Informatics - Northern Kentucky University — *Highland Heights, KY*

- Assisted in teaching Python Programming (Fall 2023) and Data Science (Fall 2024), supporting students through tutoring, labs, reviews, and grading.
- Served as a Statistics Teaching Assistant at the Mathematics and Statistics Lab.

PROJECTS

Driver Drowsiness Detection | *Python, Streamlit, OpenCV, TensorFlow*
* Developed a real-time driver drowsiness detection system using OpenCV and TensorFlow
* Integrated facial landmark detection and eye-blink monitoring to identify signs of fatigue
* Built an interactive dashboard with Streamlit for visualizing detection metrics and results
* Designed the system to trigger alerts when drowsiness is detected, ensuring enhanced road safety

Virtual Teaching Assistant | *Python, React, NodeJS, Pinecone, OpenAI API*
* Built a Retrieval-Augmented Generation (RAG) system for two graduate level cybersecurity courses at NKU.
* Implemented document chunking, vector embeddings, and semantic search for efficient information retrieval.
* Developed a user-friendly interface for querying course requirements, schedules, and policies in real-time.

TECHNICAL SKILLS

Languages: Python, Java, SQL, R, SAS, Git, MATLAB
Libraries/Frameworks: Pandas, Numpy, Matplotlib, TensorFlow, PyTorch, LangChain,FastAPI, Docker, Hadoop