

Kusal Bista

kusal.more@gmail.com | 61451920541

GitHub: <https://github.com/kusalb>

Mile End, Adelaide, 5031

Linkedin: <https://www.linkedin.com/in/kusal-bista-657422132>

Summary

Highly organized and self-driven computer science Master's student, passionate about development and designing software with strong foundation of math, programming logic and cross-platform coding. Seeking for part-time job for solid development of skill with a focus on communication, passion, collaboration and creativity.

Career history

Accounts Payable at Ridleyton Greek Home for Aged

February 2024- May 2024

- Managing the accurate and timely processing of invoices, ensuring compliance with company policies and procedures using Corporate Management software.
- Establishing and maintaining positive relationships with vendors, resolving billing discrepancies and inquiries.
- Executing timely and accurate payments through various methods, including checks, EFT, and BPAY using CIM software and banking software.
- Maintaining organized and up-to-date records of all financial transactions related to accounts payable in CIM software.

HR and Rostering Officer at Ridleyton Greek Home for Aged

December 2024- January 2024

- Conducting recruitment processes, including job postings, resume screening, and interviewing candidates.
- Developing and maintaining employee schedules and rosters to meet operational needs using CIM software.
- Addressing employee queries and concerns related to HR policies, benefits, and workplace issues.
- Facilitating effective communication between management and employees regarding rostering changes, policies, and updates.

Hospitality Service Assistant at Ridleyton Greek Home for Aged

February 2023- November 2023

- Executed thorough cleaning and sanitization of guest rooms, common areas, and public spaces following established standards.
- Managed and replenished cleaning supplies and amenities as needed.

Django Software Developer at Gaaubesi Logistics Pvt. Ltd.

March 2022 - January 2023

- Design, deploy, integrate and implement Python code to develop CMS using the Django framework.
- Create secure backend and REST APIs to provide access to core features.
- Create a wide variety of unit tests to verify the functionality of software.
- Write detailed documentation around the code.
- Research on different technologies to use according to software requirements.
- Working closely with stakeholders and fellow developers.

Advanced Programming Teacher at Deerwalk Sifal School

October 2021 - January 2023

- Primary responsibilities include teaching Python/PHP/HTML/CSS.

- Supervising an individual project.
- Conducting exams and evaluating the students.

Python Basic Programming at Deerwalk Institute of Technology *December 2020 – January 2021*

- Workshop on python programming language for 2nd year students.
- Supervising an individual project.
- Assigning projects and grading the projects made in python.

Online C/C++ programming instructor at Deerwalk Institute of Technology
April 2020 – November 2021

- Taught an online C/C++ class according to syllabus.
- Quiz and evaluation.

CTEVT Hardware maintenance practical instructor at Deerwalk Institute of Technology
October 2019 – January 2020

Worked as a practical instructor for Hardware Assembly, Repairment and Maintenance for TSLC Information Technology, 2 Years Apprenticeship CTEVT Course.

C++ programming instructor at Deerwalk Institute of Technology *October 2019 – February 2020*

- Taught C++ course according to syllabus.
- Prepared question paper and evaluated.

Technical lead at Logispark Technology PVT LTD *January 2019 – September 2021*

- Primary responsibilities include design and development of software.
- Research on technology to use according to software requirements.
- Conducting exams and evaluating the students.
- Designing a database and backend required for a product.
- Testing and implementing new development technologies.
- Hosting python projects.

Software developer at Logispark Technology PVT LTD *October 2018 – December 2019*

- Primary responsibilities include design and development of software.
- Developed several websites using Django as a framework.

Intern, R&D Unit at Deerwalk Group *June 2017 – December 2017*

- Skim and collect document related to education budget.
- Developed a visualization website on the collected data using Python/Django and dimple.js.

College projects

2023, TRI III (Deep Learning): Utilized Convolutional Neural Networks (CNNs) in PyTorch to accurately classify 55 different fruits from the Tutti Frutti dataset. Explored various architectures, hyperparameters, and pretrained models to enhance visual learning. Achieved an 94% accuracy.

2024, TRI IV (Natural Language Processing): Led the development of a sentiment analysis system tailored for hotel reviews on TripAdvisor. Incorporated VADER sentiment analysis with SVM, resulting in a 94.47% accuracy, surpassing baseline models. Implemented aspect-specific rating prediction using management. ([GitHub](#))

2024, TRI IV (Mining Big Data): This project constructs and evaluates prediction models for energy use in a low-energy house using an energy dataset. Data dependencies are analysed, preprocessing techniques applied, they are LSTM, ConvLSTM, ARIMA, Random Forest, SVM. The best-performing model is selected based on evaluation metrics. ([GitHub](#))

2023, TRI III (Deep Learning): Explored the application of Recurrent Neural Networks (RNNs), Long Short-Term Memory (LSTMs), and Gated Recurrent Unit (GRUs) for stock price prediction using time series data from the Google Stock Dataset. The project aimed to compare the accuracy and efficiency of each model architecture through systematic exploration of hyperparameters in PyTorch.

2023, TRI III (Deep Learning): Implemented and tested the Perceptron algorithm for predicting diabetes using the Pima Indians Diabetes Database. The assignment involved writing a conference paper following CVPR guidelines and submitting the code for evaluation.

2023, TRI II (Using Machine Learning Tools): Implemented various deep learning architectures to classify images of hand gestures representing letters in American Sign Language (ASL). The objective was to assess the feasibility of developing an app for translating ASL signs for non-signers. The project involved optimizing model architectures, exploring overfitting, and presenting clear performance analysis.

2023, TRI II (Using Machine Learning Tools): Applied machine learning techniques to classify histological cell images for the diagnosis of malignant breast cancer. Adopted a best practice machine learning workflow to address the client's problem efficiently.

2023, TRI II (Computer Vision)- Utilized MobileNet V3 Small architecture to classify 151 animal species. Enhanced model with pretrained networks, dataset improvements, and hyper-parameter tuning for optimal convergence and accuracy.

2023, TRI II (Using Machine Learning Tools): Implemented machine learning techniques to predict bike rental demand using a dataset of bike rentals in Seoul from 2017-18. Key objectives included data loading, visualization, experiment planning, and result interpretation.

2019, SEM VIII (Final year intern report): Comparing the products and its price from ecommerce sites by crawling the data using selenium, python, web drivers and Django.

2019, SEM VII (Final year project): Voice Based Mailing System using Hidden Markov Model (Viterbi algorithm) for visually challenged person using Python/machine learning and Django as a framework.

Organization projects

Sports Nepal Application: It is the governmental (Ministry of Youth and Sports) cross-platform application made in Django/Python and android. It had detailed information on awards, news, notice, medication rules for sports player in Nepal.

Abilis Application: The app was built to help the disabled people of Nepal. This project was sponsored by Action on Disability Right and Development. It was also a cross-platform application made in Django/Python.

Junkeri: After being the runner up in the biggest hackathon of Nepal, a sponsor wanted the working product on the system which could estimate the total surface area and the amount generated by an individual with rainwater harvesting using computer vision. I worked as a researcher to find out the accurate algorithm to find out the total surface area of a roof on extracted from open street images.

Prictack Nepal: In this project, I built a spider to crawl the vegetable rates, gold price, exchange rate data from the corresponding website to create a banner. The banner was uploaded in the Facebook page automatically in every 24 hours using selenium automation in python.

E-commerce compare: I worked on finding and building the proper crawler and a parser to extract a uniform data of a product from different application. This application was built using Django/Python, selenium, scrapy.

GIZ dataset: I have also worked in the GIZ health data to find out the most relevant hospital for a patient using machine learning where I used a logistic regression. Later, the output was visualized in a map indicating the nearest feasible hospital for a patient.

Production hall visualization (Free-lanced project): Correlation coefficient and correlation visualization on the effect of gate on different machines from the production hall was estimated using pandas, seaborn and matplotlib.

Education

The University of Adelaide *January 2023 – Present*
Master's in Artificial Intelligence and Machine Learning (M.Sc., AI/ML)

Deerwalk DWIT College *November 2015 – January 2022*
Bachelor's in science in Computer Science and Information Technology (B.Sc. CSIT)

Key Skills

Proficient in Python, Strong Understanding of Machine Learning Algorithms, Statistical Analysis, Problem-Solving Skills, Effective Communication.

Programming Skills

PyTorch, Keras, NumPy, Pandas, WordPress, Laravel, Python, Grails, Django, PHP Basic, Android Studio, Core Java, Angular JS, C programming Basic, GitHub, Harvard CS50, HTML, JS

Course Studied

Foundation of Computer Programming A & B, Using Machine Learning tool, Foundation of Data Science, Statistical Inference, Computer Vision, Deep learning, Natural Language Processing, Mining Big Data, Big Data and Project, Human Ethical Factor in Computer Science.

References:

Prayash Rimal
IT head
Gaaubesi Logistics Pvt. Ltd.
unidivided@gmail.com

Thuy Phan
Director of Clinical services (DCS)
Ridleyton Greek Home for Aged
thuy.phan@rgha.com.au