# ANUSHEEL CHAPAGAIN

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## Skills Summary

- **Data Modelling & Engineering**: Experienced in designing and modelling scalable, and maintainable data pipelines with a strong focus on data quality, distribution and access controls.
- **Data Visualization & Analytics:** Power BI (Power BI Premium, DAX), Excel (Advanced Macros), Chart.js, Dashboard Design, Real-Time Analytics
- **Machine Learning & AI:** Random Forest, XGBoost, Predictive Modeling, Forecasting, Feature Engineering, Model Optimization & Validation, Ollama, LLM fine tuning
- **Tools & Platforms:** OpenRouter API, Quickbase Pipelines, Git, Agile Development, SaaS Application Development
- **Business & Domain Expertise:** Project Controls & Cost Management, Construction Technology, Energy Analytics, Demand Response Systems, Forecast-driven Decision Support, Stakeholder Collaboration
- **Software Development and Engineering** : HTML, CSS, JS, Typescript, Python Fast API, Websockets, Supabase Database

## Professional Experience

**Green Infrastructure Project**                                                                                **St Johns, Canada**
*Project Controls Data Engineer*                                                                                2025 Jun – Current
- Designed and deployed scalable data ingestion pipelines, leveraging data modelling, power query, python programming, Power BI], to automate weekly reporting and cut report generation time by 50%.
- Automated cleaning and transformation of 15 years of project reports using Excel macros and JSON conversion, then developed a front-end interface to provide estimators streamlined access to historical project controls data, cutting search time by 70%.
- Collaborated with senior leadership (VP of Project Controls & Cost Management) to translate business objectives into analytical solutions, enhancing visibility into project performance and cost trends.

**Collide Startup Accelerator Program**                                                                    **Halifax,Canada**
*Data Driven SAAS Developer*                                                                                    2025 Jan – Current
- Designed and deployed an AI-driven SaaS platform for energy efficiency, integrating data pipelines (Openrouter API), machine learning models (random forest, xg boost), and interactive dashboards (Chart.js) to provide real-time energy analytics for end users..
- Secured 25 beta testers for the energy analytics platform, providing access to interactive dashboards that combined energy usage data with weather forecasts to drive proactive cost-saving decisions.
- Won $10,000 in funding and mentorship through data-driven product demonstrations and market validation, advancing discussions for pilot programs with utility and enterprise partners.

**SDP GP**                                                                                                                    **St. Johns, Canada**
*Data Lead (Construction Technology)*                                                                      2023 Aug – Jan 2025

- Architected real-time analytics dashboards processing 500K+ data points daily, reducing data processing time by 40% and enabling 15+ project managers and 20+ field engineers to accelerate decision-making on billion-dollar projects (West White Rose).- [West White Rose](#).
- Developed predictive models (2K+ data points/day) to forecast craft worker fatigue, enhancing weekly safety decision-making and proactively reducing on-site risks.
- Designed scalable cloud-based database architecture for 200K+ construction documents leveraging Quickbase, building automated pipelines using python scripting and quickbase pipelines and integrating with Power BI to streamline commissioning progress tracking—cutting admin workload by 50%.
- **Drove 85% adoption of self-service Power BI dashboards**, onboarding 70+ non-technical engineers and cross-functional stakeholders (construction, finance, HR, scheduling), influencing $50M+ budget decisions and improving project delivery timelines by 20%.

**GajjabIT**                                                                                    **Kathmandu, Nepal**
*Energy Data Analyst*                                                                         2019 Nov – 2021 Nov
- Developed ML-powered demand response analytics tools for Nepal Electricity Authority, processing 500K+ daily household data points with Python (Pandas, NumPy, Scikit-learn), enabling peak load optimization and reducing grid congestion by 35%.
- Engineered and scaled energy consumption databases handling 2M+ household data points, enabling seamless storage, transformation, and accessibility for engineers to build predictive models.
- Improved model performance and reliability by researching underfitting/overfitting patterns, applying feature engineering techniques, and establishing a feedback loop that enhanced forecasting accuracy.

## Personal Projects

[Prompt Overflow](#):  Web app for discovering and searching community-curated AI prompts, built with **React, TypeScript, TailwindCSS, Supabase, and deployed on Vercel**.

[Energy Intelligence:](#) Developed an LLM-powered energy analysis & simulation engine that helps global energy consumers reduce consumption inefficiencies by providing AI-driven insights and predictive analytics using Python-Flask, Python-Scikit-Learn, GPT-4, HTML, CSS, and JavaScript. To help global energy consumers understand their energy usage pattern and identify energy saving opportunities. ***Raised $10,000 (CAD) at Collide Startup Accelerator Program***.[Demo-Video](#)

[Weather Forecasting Application](#): using Python-FastAPI, Python-Uvicorn, Python-Scikit-Learn, that fetch the energy intelligence app with future weather conditions according to the user location.

[Real-time Grid Data Streaming Application:](#) Built using TypeScript,  websockets, JavaScript, HTML, and CSS that allows the admin to connect with various sensors and display their data in real-time.

[AI-Radio Application](#): Capable of voice streaming energy consumption data using Python-Unicorn, Python-WebSocket, websockets and LLM models.

## Education

**Memorial University of Newfoundland**                                              **St. Johns, Canada**
*Masters in Applied Science - Engineering*

*Related activities/Curriculum*: Python, Web3, cryptography, energy modelling, [Peer-Peer Energy Trading](#)
**Kathmandu University** **Dhulikhel, Nepal**
*Bachelor's in Mechanical Engineering*
*Related activities/Curriculum*: Energy Technology, Mechanical System Design & Troubleshooting, Object oriented programming language (C++), Arduino Programming, Python Programming, Simulation Programming, Control Systems

## Volunteering/Extracurricular

- Lead group of 4 teams to compete in 2-day Hackathon Showcase Exhibition developing a mathematical modelling system to detect and diagnose diseases.
- Organized and provided training on the use of technology in the engineering space to innovate unique solutions.
- Participated in Energy Management and Awareness program
- First responder providing first aid support to the massive earthquake disaster in nepal.
- Actively participated in blood donation campaign
- Lead guitarist for university musical band

## References

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