Hemant Thapa

I am motivated and result oriented Data Science student and graduate Mechanical Engineer accredited by the Institution of Mechanical Engineers (IMechE), and passionate for developing innovative solution to engineering problems. I am continuously seeking for new challenges, and always trying to think out of the box while looking for genuine solutions to solve the given problems and doing open-source project in data science.

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EDUCATION

Department for Education Data Science (2022-2023)

HyperionDev

BEng (Hons) in Mechanical Engineering (2019-2022)

The University of the West of Scotland, High Street, Paisley, PA1 2BE, UK

Higher National Diploma in Marine Engineering (2018-2019)

City of Glasgow College Riverside Campus, 21 Thistle Street, Glasgow G5 9XB, UK

Higher National Certificate in Marine Engineering (2017-2018)

B.P. Marine Academy, C.B.D., Belapur, Navi Mumbai, Maharashtra 400614, India

Project

1. Data Structure and Algorithms for solving Coupled Vibration on Design Analysis
   https://github.com/harryworlds/Mechanical_engineering_design_analysis/blob/main/Coupled_vibration_solved_python_part_1.ipynb

2. Data Structure and Algorithms for solving Bolt and joint on Design Analysis
   https://github.com/harryworlds/Numerical-assesment-of-bolt-strength/blob/main/Bolted_Joint_Analysis.ipynb

   https://github.com/harryworlds/Numerical-assesment-of-bolt-strength/blob/main/Bolt_strength.ipynb

3. Big Data and Data Mining Project on Facebook – Financial Analysis
   https://github.com/harryworlds/Facebook_Financial-analysis/blob/main/Financial_Analysis_Ticker_META.ipynb

4. Data cleaning and visualisation on consumer price inflation UK August 2022
   https://github.com/harryworlds/Consumer-price-inflation-UK-August-2022/blob/main/Consumer_price_inflation_UK_August_2022.ipynb

5. Data cleaning and visualisation on Customer report
   https://github.com/harryworlds/Customer_report/blob/main/Customer_report.ipynb

6. City of Glasgow College - **Ballast Water onboard treatment plant.**

   The project is based on research and development, (BWM) Ballast Water Management Convention entered into force on September 8th, 2017, and regulation has been passed from the International Convention for the Control and Management of Ships Ballast Water and Sediments (BWM). the objective is to develop an effective on-board treatment technology.

   Designing of the ballast water treatment plant are followed by establishing the standards and procedures for the management. Regulation D-1 "Ballast Water Exchange Standard", Regulation D-2 "Ballast Water Performance Standard"). 2D layout has been presented using AutoCAD for onboard treatment plant.

   Cost of investment has been evaluated into MS Excel, and market research has been performed for cost-saving through comparing price of overall components from various companies. All information is summarised using Mind-map, and time frame are estimated into Gantt chart for the planning phase, designing phase, and fitting process.

7. The University of the West of Scotland - **Numerical assessment of Cold-formed steel C & Z-section under Pure Bending.**

   The project is based on research and development, the objective of the project is to determine the collapse loads and identify possible buckling failure modes using the industrial design specification.

   Project initials through drawing 3D model of industrial design specification of the Cold-formed Channel and Zed section beam into PTC Creo parametric. the three-point pure beam bending test has been performed into ANSYS software. Finite element simulation is setup using engineering data of non-linear material property. The project deadline is utilised through the Gantt chart using Microsoft Excel. The timeframe has been divided into Pre-processing, Set up of the solver, Computational of the solution, and postprocessing. Finalisation and presentation of the result are performed through parametric study employing Microsoft Excel and Microsoft PowerPoint. Verification is performed through data comparison between Finite element solution and industrial data.

   https://github.com/harryworlds/Numerical-assessment-of-cold-formed-steel-channel-and-zed-section-under-pure-bending.

Programming Skills: Statical analysis and computing, Engineering programming, Data mining, Data Visualisation, Engineering Design and research, Machine Learning,

Mechanical skills: Engineering design specification knowledge, 2D surface and 3D Solid Modelling, Design Analysis, Finite Element Analysis (FEA), Materially nonlinear Analysis, Static Structure Analysis, Stress Analysis & Safety factor, Fatigue Analysis, Computational Fluid Dynamic (CFD) Simulation, Fluid flow Analysis, Thermal Analysis, Composite Structure, Design and Prototype Testing, and environmental impact Assessments.

Asset Management skills: Technical Analysis, Fundamental Analysis, Break-Even Analysis, Portfolio construction and management, Risk Management, Valuation and Risk Model, Quantitative analysis (Advance Statics), Trend Analysis, and Start-up valuation.

Programming languages and Software: Python programming, Power BI, Tableau, SQL and SQL lite, Jupyter Notebook, Visual Studio Code, PTC Creo parametric, SolidWorks, ANSYS, MS Word, MS Excel, MS Visio, MS PowerPoint, MS Team, Google Sheet, and Adobe Photoshop.

Soft Skills: Teamwork, Time Management, Creative Thinking, Good Listener, Problem Solving, Effective Communication, Public Speaking.

Work Experience

Post Office (Oct 2020 - Present) – 2 years & 2 months

- Assisting customers during deposit and withdrawal of security from their savings accounts.
- Weekly helping pensioners to withdraw security from HMRC pension account.
- Dealing with foreign exchange, and complete understanding of money gram service for transferring and receiving funds from overseas.
- Dealing with financial services, such as benefits and premium bonds.
- Assisting with HMRC postal order cheques.
- Complete responsibility for daily cash declaration at the end of trading.
- Keeping records and making sure the books balance at the end of each day.

Moore Global (April 2021 – Mar 2022) – 1 years

- Data mining of England, Whales, Scotland, and Northern Ireland-based companies.
- Data cleaning through excel sheet and organizing through excel pivot table.
- Assisting with quality assurance compliance.
- Preparation of capital allowance reports for submission to clients.
- Responsibly perform, technical analysis and fundamental analysis of the U.K companies for data validation.
- Studying the companies' activities and status in a fast-paced world.
- Analysing the list of jobs for clients, and responsible for tracking the record of data.
- Update and maintain the office policies and procedures.

References: References will be available on request.