Umal Manjitha

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Objective

Fast learner with strong social and soft skills, highly analytical, and self-driven to deliver optimal solutions and products. Passionate about collaborating in team environments to generate innovative ideas and drive impactful results. Eager to adapt and grow while contributing effectively to organizational success.

Experience

- **State Engineering Corporation, Sri Lanka [🌐]** *December 2023 - July 2024*
  Trainee Civil Engineer New District Court & Magistrate's Court Complex, Galle
  - Hands-on experience in mass concreting, reinforcement works, site documentation, site planning [📄]
  - Implemented brick masonry, plastering, chemical anchoring, and waterproofing techniques
  - Managed safety, resource planning, and quality control in collaboration with multidisciplinary teams

Education

- **University of Moratuwa** *2021 - 2025*
  B.Sc. Engineering (Hons.) in Civil Engineering Bandaranayake Mawatha, Moratuwa, Sri Lanka
  - GPA: **3.30 / 4.00** 📄
  - **Key Modules:**
    - Design of Concrete Structures
    - Structural Analysis
    - Geotechnical Design
    - Highway Engineering
    - Environmental Engineering
    - Hydraulic Design
- **Rahula College** *2006 - 2019*
  Primary - Secondary education Matara, Sri Lanka
  - G.C.E Advanced Level: Physical science stream **Z-score: 2.55 | Island Rank - 172**

Projects

- **Waterfront Development in Galle - Comprehensive Design Project** *Oct 2024 - Jul 2025*
  My Contribution | Technologies: ETABS,AutoCAD, Revit, HEC-HMS, Geo Slope, ArcGIS [🌐]
  - Developed the ETABS model for the building
  - Geotechnical design for the building
  - Stabilizing the 15m height steep slope at the back of the site
- **Shell roof design for a Basketball stadium** *Sep 2023 - Oct 2023*
  Technologies: SAP2000, AutoCAD, Grasshopper [🌐]
  - Gave three alternative designs for the roof structure
  - Define the Shape of the Structure by the form-finding method
  - Calculate the thickness of the shell by central line theory
  - Building a scaled-down physical model for testing
- **Reinforced Concrete Apartment Building** *Jul 2023*
  Technologies: SAP2000 , ETABS, SAFE, AutoCAD [🌐]
  - Calculated the rebar quantity
  - Analyze RC slabs for deflections
  - Prepare architecture visualization of the building
- **Assessing HEC-HMS model and Machine Learning performance in predicting river discharge** *Jun 2024 - Jul 2025*
  Undergraduate Research Project | Technologies: HEC-HMS, Python, Jupyter Notebook, VS Code [🌐]
  - Develop and calibrate a HEC-HMS model for simulating the discharge
  - Develop and train machine learning algorithms for predicting the discharge
  - Compare the performance of the HEC-HMS model and the machine learning algorithms
- **Leo Scroll** *Jun 2021*
  Technologies: Flutter, Android Studio, Git [🌐]
  - Member of App Development Team
  - Developed a cross-platform mobile app 'Leo-Scroll'
  - UI/UX Design for the app
- **Estimating Flood Hydrograph for Welimada Area** *Aug 2023 - Sep 2023*
  Technologies: HEC-HMS, ArcGIS, Digital Elevation Models, Excel(advanced) [📄] [🌐]
  - Estimating hydrological losses using the SCS-CN method
  - Developing hyetographs from IDF curves
  - Using HEC-HMS software for hydrologic modeling

- **Golden Island Bridge Reconstruction Concept** *May 2022 - Jan 2023*
  Technologies: Auto CAD, Prokon, Physical Model [🌐]
  - Suggested three alternative designs for the project
  - Did a field inspection of the site
  - Analyze and test the computer & physical models.
- **Coursera Project Network** *Sep 2022*
  Technologies: R Programming, Python, Machine & Deep Learning [🌐]
  - Mining quality prediction using Machine & Deep Learning

Coursework & Additional Training

- **ETABS & SAFE in the Structural Design | Udemy** [✹]
- **Autodesk Revit & Robot Structural Analysis + Sheets + BOQ | Udemy** [✹]
- **Introduction to Data Science Specialization | IBM** [✹]
- **Project Management Specialization | Google** [✹]
- **AutoCAD | Sault College of Applied Arts** [✹]
- **Civil 3D - MEGA course for Civil Works | Udemy** [✹]
- **Front-End Developer Professional Certificate | META** [✹]

Skills

- **Tools**
  - Proficient in AutoCAD, ETABS, SAP200, Python, HEC-HMS
  - Working knowledge of: Revit, Civil 3D, Prokon, SAFE
- **Engineering Concepts**
  - Proficient in: GIS, Computational Fluid Dynamics
  - Working knowledge of: BIM, Finite Element Analysis
- **Statistical analysis tools:** Python (pandas, NumPy, SciPy), R , MATLAB
- **Other Skills:** Survey design, Field data collection and Stakeholder interviews
- **Sports:** Swimming, Badminton, Hockey

Leadership / Volunteer Experience

- **Public Relations Committee Lead** *Jul 2022 - Present*
  Civil Engineering Society, University of Moratuwa [🌐]
  - Maintanace of *ces.uom.lk* website, Facebook & LinkedIn Pages
  - Suhastha 2023 - Member of the Marketing and Fundraising Committee
  - Civil Padura 2025 - Member of the Video Editing Team
- **Matara District Engineering Professionals Association** *Aug 2020 - Aug 2024*
  Lead Designer
  - Coordinate flyers, video designs for the events and meeting in the society
- **EXMO | 2023** *Jul 2023*
  Web and App Team of the Marketing Committee [🌐]
  - Made 3D AR models for the App
  - Department facilitator for Surveying division
- **IEEE Student Branch University of Moratuwa** *2022 - 2023*
  Volunteer
  - Volunteered in "Rise Up Mora 2022" - Contributed to develop the interview web portal
  - Volunteered in "Gammaddata IEEE Api" - Technical Team
- **Leo Club of University of Moratuwa (Leo District 306A2)** *Jun 2022 – Jun 2023*
  Member
- **Member of the School Hockey Team** *2014 - 2019*
  Left Forward

Additional Information

Languages: English (Professional), Sinhala (Native)
Interests: Structural Engineering, Hydraulic Engineering, Machine Learning aspects of Civil Engineering
Hobbies: Volunteering, Video-gaming, Watching movies, Traveling

References

1. **Prof. Lalith Rajapakse**
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