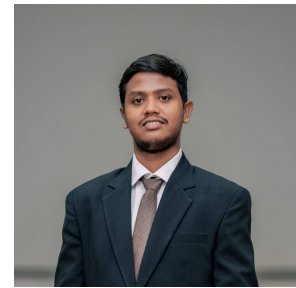


# Umal Manjitha

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[manjithahhu20](#) [Portfolio website](#)

Kotuwegoda, Matara - 81000, Sri Lanka



## 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 [\[Globe\]](#)

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 [\[A\]](#)
- 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

July 2021 - Ongoing\*

B.Sc. Engineering (Hons.) in Civil Engineering

Bandaranayake Mawatha, Moratuwa, Sri Lanka

- GPA: 3.20 / 4.00 (Up to 7<sup>th</sup> Semester) [\[A\]](#)

#### ◦ Key Modules:

\* Design of Concrete Structures

\* Highway Engineering

\* Structural Analysis

\* Environmental Engineering

\* Geotechnical Design

\* Hydraulic Design

### • Rahula College

2006 - 2019

Primary - Secondary education

Matara, Sri Lanka

- G.C.E Advanced Level: Z-score: 2.55 | Island Rank - 172

## PROJECTS

### • Assessing HEC-HMS model and Machine Learning performance in predicting river discharge

Jun 2024 - Present

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

### • Waterfront Development in Galle - Comprehensive Design Project

Oct 2024 - Present

My Contribution | Technologies: AutoCAD, Revit, ETABS, HEC-HMS, Geo Slope, ArcGIS



- Stabilizing the 15m height steep slope at back of the site
- Flood risk assessment for project site
- Field Visit - Hydrological impact assessment
- Making of the ETABS model for the building - ongoing

### • 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 form-finding method
- Calculate the thickness of the shell by central line theory
- Building a scale down physical model for testing

### • 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.

## • Reinforced Concrete Apartment Building

Technologies: SAP2000, ETABS, SAFE, AutoCAD

- Calculated the rebar quantity
- Analyze RC slabs for deflections
- Prepare architecture visualization of the building

## • Coursera Project Network

Technologies: R Programming, Python, Machine & Deep Learning

- Mining quality prediction using Machine & Deep Learning

Jul 2023



Sep 2022



## 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
- **Programming Languages:** Python, JavaScript, MATLAB, L<sup>A</sup>T<sub>E</sub>X
- **Soft Skills:** High Analytical Skills, Problem Solving, Leadership, Professional Communication, Proven Ability to Work Independently
- **Sports:** Swimming, Badminton, Hockey

## LEADERSHIP / VOLUNTEER EXPERIENCE

- **Public Relations Committee Lead** Jul 2022 - Present  
Civil Engineering Society University of Moratuwa   
  - Maintenance of [ces.uom.lk](http://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 "Gammadata 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:** Hydraulic Engineering, Machine Learning aspects of Civil Engineering

**Hobbies:** Volunteering, Video-gaming, Watching movies, Traveling

## REFERENCES

1. **Prof. Lalith Rajapakse**  
B.Sc. Eng. Hons. (Moratuwa), M.Sc. (Saitama), Ph.D. (Saitama), CEng, ECSL, MIESL.  
Professor, Department of Civil Engineering,  
University of Moratuwa  
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2. **Dr. G.M.C.A Perera**  
B.Sc. Eng. Hons. (Moratuwa), M.Sc. (Moratuwa), Ph.D. (Nagoya).  
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