



ARVEEN ANBARASAN

ESG & SUSTAINABILITY ENGINEER

Smart Infrastructure | Digital Construction Technologies | Renewable Infrastructure Analytics

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PROFESSIONAL SUMMARY & ACADEMIC FOUNDATION

Bachelor of Civil Engineering (Hons)



UNITEN | CGPA 3.41

Graduate Civil Engineer specializing in ESG systems, smart infrastructure, and sustainability-driven construction technologies, with a strong focus on integrating digital engineering into infrastructure delivery workflows. Experienced in developing AI-assisted ESG analytics frameworks, IoT-enabled Building Automation & Control Systems (BACS), and sustainable water management solutions for urban infrastructure applications.

Skilled in bridging traditional civil engineering practices with emerging technologies including data analytics, automation systems, and sustainability reporting frameworks. Passionate about supporting renewable infrastructure, digital transformation, and climate-resilient development initiatives aligned with Gamuda Australia's innovation and sustainability direction.

PROJECTS & RESEARCH

ESG Construction Intelligence Platform | ITEX 2026 Silver Award

Applied Research

UNITEN | ESG Systems Engineering | AI-Assisted Infrastructure Analytics

May 2026

Selected as a university representative for ITEX 2026 for the development of an ESG-focused digital intelligence platform targeting sustainability visibility within construction and infrastructure environments. Developed a prototype ESG analytics framework for the Social Pillar, integrating workforce metrics & sustainability indicators into centralized reporting workflows aligned with modern infrastructure sustainability initiatives. This project was awarded the Silver Medal for ITEX 2026.

ESG Analytics

Digital Governance

Sustainability Reporting

Sustainable Water Systems Architecture

Lead Engineer

Syopz Mall Smart Infrastructure Integration

Designed an automated Rainwater Harvesting (RWH) system with an IoT-enabled Building Automation & Control System (BACS), integrated into their traditional water supply system for GreenRE Certification. Developed intelligent monitoring workflows for filtration efficiency, water distribution performance, and operational sustainability optimization while supporting smart facility management and environmental resource efficiency.

IoT & BACS

Smart Water Management

Sustainable Systems

Design of 50 Units Double Storey Housing, Bandar Kinrara 9

IDP Project

Structural Supervision & Infrastructure Planning Lead

Served as the project lead for the design and supervision of a 50-unit residential housing development in Bandar Kinrara 9. Managed infrastructure planning involving site development, drainage integration, recreational lake park coordination, and geotechnical planning while ensuring compliance with urban development regulations and sustainable infrastructure considerations.

Structural Design

Urban Planning

Geotechnical Engineering

PROFESSIONAL EXPERIENCE

Aden One (M) Sdn Bhd

Nov 2023 - May 2026

Sustainable Engineer

Supporting sustainability-focused engineering initiatives involving smart infrastructure systems, ESG integration, and environmental performance optimization for commercial and residential developments.

- Lead Engineer for the Syopz Mall Rainwater Harvesting (RWH) system integrating IoT-enabled Building Automation & Control Systems (BACS).
- Developed sustainability monitoring workflows supporting environmental efficiency and intelligent facility management for HSBC Malaysia.
- Assisted in technical audits, sustainability reporting support, and energy optimization assessments for Green Building Index (GBI), GreenRE & Malaysia Green Building Council (MGBC).
- Supported engineering coordination involving sustainable infrastructure integration and environmental compliance workflows.
- Conducted site measurements, infrastructure assessments, and AutoCAD-based engineering documentation support for Professional Engineering Report (PER).

Aden One (M) Sdn Bhd

July 2023 - Sept 2023

Industrial Trainee (Civil Engineering & ESG)

Supported engineering and ESG-related operational activities involving structural audits, demolition supervision, and sustainable infrastructure coordination.

- Assisted in structural safety audits and building defect investigations for commercial infrastructure projects.
- Supported demolition workflow supervision and environmental compliance coordination for urban developments.
- Conducted site inspections, engineering measurements, and technical documentation preparation.
- Assisted engineering teams with AutoCAD drafting support and infrastructure coordination activities.

A Vin Technologies

Jan 2022 - July 2023

Full-Stack Website Developer

Architected and maintained robust digital ecosystems for technical startups, specializing in backend database logic and intuitive user experiences. This role built the computational foundation required for my current research in applying deep learning models to complex engineering signal processing.

Scicom (MSC) Berhad

Sept 2020 - Sept 2021

Customer Experience Executive

Managed stakeholder communication and operational coordination within an international customer operations environment requiring strong communication, problem-solving, and cross-cultural collaboration skills.

- Supported high-volume operational workflows involving international stakeholders and service coordination.
- Developed professional communication and issue-resolution capabilities within fast-paced operational environments.
- Strengthened adaptability, stakeholder management, and organizational coordination skills.

TECHNICAL STACK

Engineering & Sustainability

- Sustainable Infrastructure Design
- ESG Integration & Reporting
- Water Resource Engineering
- Infrastructure Planning
- Environmental Compliance
- Structural Engineering Fundamentals
- Geotechnical Engineering Fundamentals
- Sustainable Urban Systems

Smart Systems & Digital Engineering

- IoT Systems Integration
- Building Automation & Control Systems (BACS)
- Smart Infrastructure Analytics
- Python (Pandas, Scikit-Learn)
- Data Analytics
- AutoCAD
- Digital Reporting Systems

Project & ESG Management

- ESG Analytics
- Sustainability Reporting
- Stakeholder Coordination
- Technical Documentation
- Infrastructure Sustainability
- Circular Economy Principles
- Climate Resilience Concepts

FOUNDATIONAL PROFESSIONAL EXPERIENCE

7-Eleven Malaysia

June 2019 - Dec 2019

Retail Operations & Inventory Logistics Associate

Supported inventory coordination, logistics handling, and operational workflow management within a fast-paced retail environment emphasizing accuracy, accountability, and organizational discipline.

Glenmarie Golf & Country Club

Dec 2018 - June 2019

Guest Experience Associate

Supported customer operations, logistics coordination, and service management within a high-standard hospitality environment requiring professionalism, communication, and operational efficiency.

PROFESSIONAL CERTIFICATIONS & CONTINUOUS LEARNING

ESG, Sustainability & Infrastructure

- Sustainable Building Frameworks Familiarization, LEED, GBI, and GreenRE
- ISO 14001 Environmental Management Systems, Foundation Awareness
- Embodied Carbon & Life-Cycle Assessment (LCA) Training, One Click LCA Academy
- IFRS Sustainability Disclosure Standards (formerly TCFD) - IFRS Foundation
- Introduction to Sustainable Finance, United Nations Environment Programme (UNEP FI)
- Foundations of ESG, Corporate Finance Institute (CFI)
- ESG Foundation Program, UN Global Compact

Digital Engineering & Systems Analytics

- Google Data Analytics Professional Certificate, HRD Corp e-LATIH
- Prompt Engineering & AI Workflow Optimization, HRD Corp e-LATIH
- The Next Frontier of Artificial Intelligence, HRD Corp e-LATIH
- Academic Writing for Engineering & Research Documentation, HRD Corp e-LATIH

HONOURS, LEADERSHIP & PROFESSIONAL AFFILIATIONS

- **Graduate Engineer (BEM):** Registered Graduate Engineer with the Board of Engineers Malaysia (BEM) as part of the professional engineering pathway.
- **CIDB Construction Personnel:** Registered construction personnel under CIDB Malaysia for operational and site-related engineering activities.
- **NIOSH-TENAGA Safety Leader Passport (NTSLP):** Completed safety leadership certification focused on utility, energy, and infrastructure workplace environments.
- **ITEX 2026 Silver Medalist:** Represented UNITEN at ITEX 2026 and received a Silver Medal for developing an ESG-focused digital intelligence platform for construction and infrastructure applications.
- **Head of Department Commendation:** Recognized by the Head of Civil Engineering at UNITEN for strong initiative in sustainability-focused engineering research and independent systems development.
- **Student Representative Council (SRC) Executive:** Supported student governance initiatives, welfare coordination, and organizational activities at UNITEN.
- **Stable & Sustain Structure Competition (3SC) Winner:** Participated in and won a university structural design competition focused on sustainable and resilient infrastructure concepts.