

Fadzai Zivanai

+ (1) 503-484-4288 • fzivanai@pdx.edu • <https://www.linkedin.com/in/fadzai-zivanai-66687b183>

SUMMARY

I am a motivated, hardworking, adaptable, and responsible civil engineer who is keen to make a positive impact in the civil engineering industry with the professional, intellectual, and technical skills I developed during my academic and professional work experience in the engineering field. I have a competent methodical, task-perfection approach to work and a strong drive to see things through to completion. I have a passion for learning and developing new and existing skills.

EDUCATION

MS. Eng Civil and Environmental Engineering **April 2024 - Present**
Portland State University, Portland, Oregon, USA

B.Eng. Hons Civil and Water Engineering **Graduated November 2021**
National University of Science and Technology (NUST), Bulawayo, Zimbabwe **Upper Second Class**

ACHIEVEMENTS/AWARDS

Graduate Assistantship, Portland State University, Portland, OR, USA **2024**
Mat Haug Scholarship for the 2024-2025 Academic Year **2024**

AFFILIATIONS & TECHNICAL SKILLS

Affiliations: American Society of Civil Engineers (ASCE), Earthquake Engineering Research Institute (EERI), ASCE Geo-Institute Graduate Student Organization (ASCE GI GSO), Zimbabwe Institution of Engineers (ZIE)

Design and Applications: Prokon, Civil 3D, Revit, ArcGIS, AutoCAD, MatLab, Python

Problem solving: Design Thinking approach, Mathematical reasoning and Algorithmic thinking.

Strong background: Geotechnical Engineering, Structural Design, Structural Analysis, Engineering Mathematics, Water and Sanitation Systems and Road Infrastructure Design

WORK EXPERIENCE

Teaching Assistant – Portland State University, Portland, OR, USA **April 2024 – Present**

- Teaching geotechnical laboratories and grading laboratory reports and assignments

Graduate Trainee – Prostruct Consulting Engineers, Harare, Zimbabwe **July 2021 - February 2024**

- Carrying out civil designs, structural designs and project management of various projects

Intern – Prostruct Consulting Engineers, Harare, Zimbabwe **August 2019 - September 2020**

- Carried out civil designs, structural designs and structural assessments of multistory buildings.

PROJECTS AND RESEARCH

Microbially induced desaturation MID in liquefiable soils, Portland, OR, USA **April 2024 - Present**
Graduate Researcher

- Evaluating the longevity of the MID gas in desaturated silty soils to mitigate liquefaction.

RGM International Airport, Harare, Zimbabwe (US\$153,000,000) **May 2022 - February 2024**
Assistant Site Engineer

- Reviewing designs and inspection of construction works
- Conducting site investigation and data analysis
- Monitoring weekly progress and preparation of progress reports
- Supporting general Occupational Health and Safety in the organization

National Oil Infrastructure Company of Zimbabwe (NOIC) (US\$90,000,000) June 2022 - February 2024

Junior Structural Engineer

- Planning and designing and analysis of concrete and steel structural members
- Issuing structural drawings and engineering plans
- Conducting site inspection of the construction works
- Gathering data, compiling reports, and delivering presentations to relevant stakeholders

Harare-Beitbridge Highway Road, Zimbabwe (US\$986,000,000)

April 2022 - February 2024

Junior Structural Engineer

- Inspecting the condition of the existing road culverts and bridges along the highway road
- Designing of underpass culverts and bridges along the highway road
- Monitoring progress and prepare progress reports
- Supporting general Occupational Health and Safety in the organization

University of Zimbabwe Quinary Hospital (US\$ 440,000,00)

November 2021 - February 2024

Junior Structural Engineer

- Planning and designing and analysis of concrete and steel structural members
- Issuing structural drawings and engineering plans
- Conducting site inspection of the construction works
- Monitoring progress and prepare progress reports

Assessment of Masvingo Water Supply and Demand System

May 2021 - November 2021

Undergraduate Researcher

- Conducted literature review on water supply and demand for urban water supply systems
- Designed a survey questionnaire to gather information from the residents of Masvingo
- Deduced data from historical records of local municipalities
- Performed data analysis and presentation
- Writing of thesis

University Start-up World Cup 2021, Venture Cup, Denmark

June 2021 - November 2021

Project Lead

- Led a team of three to come up with a start-up project that deals with the designing and manufacturing of electronic devices for groundwater data harvesting.
- The start-up reached the semi-finals of the world cup competitions.

Liquid retaining structures project – NUST, Zimbabwe

June 2021 - September 2021

Project Lead

- Led a team of four to design a 600m³ raw sewage reinforced concrete circular tank which was to be constructed on expansive soils.

CO-CURRICULAR ACTIVITIES AND VOLUNTEERING

Earthquake Engineering Research Institute Student Leadership Council (EERI SLC) June 2024 –

Present

Outreach Chair

- This is a group of graduate students that organize seismic design competitions and expand the knowledge sharing and research on seismic hazard mitigation

American Society of Civil Engineers Geo-Institute Graduate Student Organization April 2024 - Present

Treasurer

- This is a group of geotechnical graduate students at Portland State University, and it carries out outreach programs that educate high school and middle school students about geotechnical engineering.

Yarutsai Trust fund

July 2020 – Present

Co-Founder

- This trust fund is meant to provide financial support to outstanding primary and secondary pupils from poor rural families in Zimbabwe.

Tea in 60

July 2021 – March 2023

Mentor

- This is a group for young women in engineering where we mentor female engineering students, offering them carrier guidance and industry opportunities.

Carrier guidance Workshops – Gokomere High School, Zimbabwe

Summer 2016 & 2018

Events Planner

- Helped lower six and upper six sciences students with carrier guidance through giving them detailed description of various science related degree programs.