UFUK SEN
CIVIL ENGINEER, MSC

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OBJECTIVE

(I already have an Employment Authorization Documentation Card)

I am a structural engineer with a master's degree specializing in earthquake engineering of concrete dams. I have five years of experience in the structural and hydraulic design of dams, their spillways and outlet works including cut-and-cover conduits and retaining walls, gained through extensive hands-on experience in the department of dams and hydropower plants. Now, I am seeking a position where I can apply my comprehensive understanding of engineering to contribute to the field. Excited to leverage my skills in structural and hydraulic design to enhance the resilience and safety structures.

EDUCATION

Louisiana State University, USA **Master's Degree (2018)**

Civil Engineering – GPA: 3.43 – Thesis: Risk Assessment of Concrete Gravity Dams under Earthquake Loads

During my graduate studies, I focused on the seismic assessment of concrete gravity dams. I used Finite Element Analysis software, ANSYS, to model the dam, incorporating fluid-structure interaction (FSI) and soil-structure interaction (SSI) for more accurate results. Seismic fragility curves were developed to evaluate the dam's seismic performance and make risk assessment.

***Courses**: Adv. Bridge Eng., Structural Design u/ Dynamic Loads, Structural Reliability, Prestressed Concrete, Mech. of Materials*

University of Texas at Austin, USA **ESL (2016)**

English as a Second Language Program

Bulent Ecevit University, Turkey **Bachelor's Degree (2013)**

Civil Engineering – GPA: 3.02

EXPERIENCE

Project Civil Engineer **General Directorate of State Hydraulic Works of Turkey (DSI)**

NOV 2018 – DEC 2024 / ANKARA, TR

DEP. OF DAMS AND HYDROPOWER PLANTS

My responsibility here was to check reports prepared by private companies for accuracy and compliance with regulations:

- Conducted structural analysis of dams (stability, static, dynamic etc.)
- Conducted hydraulic design of spillways and outlet work, (i.e., discharge capacity, flood routing, water surface elevation, cavitation, terminal structures design, etc.)
- Conducted stability analysis for retaining walls and flood protection structures,
- Determined place, type and size of spillways and outlet works based on topography, hydrology, type of dam, etc.
- Conducted optimization studies on spillway size vs. dam height & outlet work size vs. cofferdam height,
- Conducted slope stability and tunneling assessments.

Control Engineer **DSI 233. Division**

AUG 2022 – FEB -2023 / BARTIN, TR

Inspected the construction stages of Flood Protection Structures for compliance with the project.

Field Engineer **Bahadir Engineering & Aras Construction Business Partnership**

SEP 2013 – FEB 2014 / ELAZIG, TR

Inspected the construction stages of prison, housing, workplace as parts of High Security Prison Construction Project for compliance with the project.

SKILLS & SOFTWARE

- Earthquake Engineering, Dams and HPPs, Spillways and Outlet Works, Dynamic Analysis, Finite Element Methods, Flood Protection Structures, Retaining Walls
- ANSYS, SAP2000, AutoCAD, FLOW-3D, HecRAS, MATLAB, Python

PUBLICATIONS

Sen, U., & Okeil, A. M. (2020). Effect of biaxial stress state on seismic fragility of concrete gravity dams. Earthquakes and Structures, 18(3), 285.

AWARDS

Awarded with a remarkable and competitive fellowship to study abroad by the Ministry of National Education of Turkey, which also funded my MSc education at LSU.