AINUR ABILBAYEVA

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SUMMARY

Data enthusiast with a strong background in engineering, skilled in data analysis, machine learning, and statistical modeling. Experienced in conducting impactful research, implementing data-driven solutions, and using programming languages such as Python and R to extract insights from complex datasets.

EDUCATION

University of Maryland, MD, USA — Expected Dec. 2023
MSc in Civil Engineering (CGPA 3.8/4.0), full scholarship — *College Park, MD, USA*
Coursework: Data Mining and Machine Learning, Data Analytics for Engineers, Bayesian Statistics, Database Design, Computer Vision, Natural Language Processing (NLP)

Nazarbayev University, Kazakhstan — June 2021
BEng in Civil Engineering (CGPA 3.68/4.0), full scholarship — *Astana, Kazakhstan*
Bachelor with Honors (Cum Laude), top 10% class

EXPERIENCE

University of Maryland (Plannning and Construction, Facilities Management) — Dec. 2022 - Present
Associate Project Manager / Project Coordinator — *College Park, MD*
- Involvement in 5+ different projects with contractors and subcontractors as a major point of contact
- Responsible for Project Plan, Budget, and Estimates (Change Orders, Requests for Information)
- Collaboration with cross-functional teams, fostering transparent communication and facilitating a cohesive working environment
- Utilized project management tools (e-builder, SAP) to monitor project progress, budget and track milestones

University of Maryland — Jun. 2022 - Present
Graduate Research Assistant
- Spearheaded data fusion and semantic modeling for a "Smart City Data Fusion Ontology" project
- Utilized computer vision techniques for practical applications within the framework of smart cities
- Constructed and analyzed Washington DC graph network using OpenStreetMap data for comprehensive insights

Schneider Electric (Energy Business Unit) — Jun. 2021 - Dec. 2021
Project Coordinator — *Central & Eastern Europe*
- Coordinated over 40 data-oriented projects, liaising with contractors and subcontractors
- Developed and maintained databases, collaborating with the Database team for vendor and material references
- Performed financial data analysis and contributed to a 40% increase in the Service Department margin.

Nazarbayev University — Jan. 2020 - May. 2021
Research Assistant, project "Unreinforced Masonry Retrofitting Using ECC" — *Astana, Kazakhstan*
- Developed Python-based masonry wall models for ECC retrofitting, involving data processing and algorithm development
- Analyzed the mechanical properties of the materials (ECC and masonry) from experiments and simulation results through sensitivity analysis, statistical data analysis, data interpretation, and predictive modeling

PROJECTS

Large Scale Traffic Analysis via Machine Learning Models for Smart Cities — Oct. 2022 - Nov. 2022
- Trained deep neural networks and decision trees on large dataset obtained from the Freeway PeMS database, estimating traffic speed and flow for 8 freeway segments
- Achieved 95% model accuracy, demonstrating optimization and production of large-scale product improvement
Packages used: numpy, sklearn, keras, tensorFlow, pandas, matplotlib, seaborn

Prediction of Bridge Condition Rating using Neural Networks — Mar. 2022 - May. 2022
- Predicted the condition rating of bridges on the NBI dataset from 1992 to 2020
- Analyzed the impacts of bridge attributes on its condition using WEKA, embodying the process of extracting insights from data for improving machine learning models
- Obtained 92% accuracy in average on the optimal architecture of the models using CNN and WEKA
Packages used: numpy, sklearn, keras, tensorFlow, pandas, matplotLib, seaborn

SKILLS

Programming Languages: Python (proficient), MySQL, Java, R
Tools: Optaplanner, MS Project, Weka, SAP, ABAQUS CAE, A\B Tests
Languages: Kazakh - native, Russian - fluent, English - fluent, Turkish - intermediate