Turbold Baatarchuluu

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EDUCATION

New York University Center for Urban Science and Progress
Masters in Urban Data Science
The University of Illinois at Urbana-Champaign
Bachelor of Science in Civil Engineering

RELEVANT SKILLS

Coding: Python (Numpy, Pandas, PySpark, Scikit-learn, Tensorflow, Pytorch) SQL, MongoDB, Git, Docker, IoT
Data Science: Support Vector Machines, Principal Component Analysis, Feature Engineering, Random Forest Modeling, Computer Vision, Time Series Forecasting, Bayesian Inference, Network Analysis
Spatial Analytics: ArcGIS, QGIS, Google Earth Engine, GeoPandas
Building Energy Analysis: Revit, BEopt, EnergyPlus, REM/rate, eQUEST

PROJECTS

Low-Power Computer Vision Counting Research
- Developed an edge-compatible computer vision model using Tensorflow Lite for the NYC Mayor's Office of the CTO. The model accurately counts and tracks pedestrian trajectories with up to 93% accuracy.

Building Segmentation and Classification for Ger Districts of Ulaanbaatar, Mongolia
- Developed a machine learning model using random forest classifier to map and identify buildings based on morphometric features extracted from Open Street Maps
- Achieved a 99.8% accuracy in predicting unlabeled ger buildings using a semi-supervised approach

EXPERIENCE

New Avenue Homes   *June 2022 - Present*
Manager of Data Science & Construction Processes   *Remote*
- Oversaw and collaborated with general contractors in New Avenue network to ensure accuracy in construction budgeting and scope of work
- Conducted comprehensive value engineering and cost-estimating analysis for investment properties
- Created a robust framework for automated construction cost estimation using RSMeans and CSI codes

Arcadis   *February 2020 - September 2021*
Data Analyst   *Remote*
- Analyzed historical data center construction to identify the cost of poor quality and pinpointed areas of improvement
- Created data pipeline map to identify the potential for automatization
- Created a dashboard to visualize the cost of poor quality data for executive leadership and decision making
- Applied five why root cause analysis to identify causes of poor quality in construction, project management, design, and procurement process for data centers

Cognizant   *May 2018 – October 2019*
Energy and Utility Analyst   *Clayton, CA*
- Conducted case studies on trends in Electricity, Gas, and Water segments in Utilities. Research the cost benefits of digitization in the Oil & Gas industry utilizing analytics, automation, and machine learning.

Illinois Solar Decathlon   *January 2015 – May 2018*
Engineering Lead and HVAC/Energy Analysis Lead   *Champaign, Il*
- Coordinated HVAC, Plumbing, Electrical, and PV subteams to design a Net-Zero Energy House
- Analyzed and optimized electric loads for the solar-powered house
- Performed energy usage modeling analysis using BEopt, REM/Rate, and Autodesk Insight
- Utilized Revit and BIM software to design and model an efficient and cost-effective HVAC system

Applications for DDU Geothermal Resources in the Illinois Basin   *September 2017 – May 2018*
Facility applications consultant   *Urbana, Il*
- Utilized Markov Chain Monte Carlo to conduct uncertainty and sensitivity analysis
- Tested the feasibility of geothermal energy resources for district heating and cooling
- Assessed environmental and economic impacts of the project using life cycle assessment, life cycle costing, and technology analysis