LIZHONGYANG ZHOU

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EXPERIENCE

Information Modelling Engineer | BIM Center | Royal BAM Group   Dec. 2018 - Present

Information modelling for project BORG Groningen, housing reinforcement in earthquake zone

- Performed correlation analysis and predictive modelling of Seismic data to determine the most governing variables for housing structural failure using Machine Learning algorithms (Random Forest and Neural Network).
- Applied Python to automate the process of extracting geometry data from the finalized parametric model in Revit. The program accelerates the engineering modelling progress from 3 - 4 days to 1 day.

Digitizing the realization process of De Zamlhaven, Rotterdam

- Wrote scripts (Dynamo/Python) to automate Revit modelling tasks, and to streamline data management workflow.
- Developed BIM integrated model incorporates multidisciplines for knowledge sharing and interface management.

Graduate Intern | Master Thesis | TUDelft & Witteveen+Bos   Jan. 2018 - Oct. 2018

A Machine Learning Approach for Cost Estimation in the Project Initialization Phase

- Developed a cost prediction model (Neural Network) in Matlab based on the historical road pavement cost data.
- Explored the significance levels and patterns between associated drivers and target cost through statistical analysis.
- Evaluated the performance of machine learning models in terms of prediction accuracy and knowledge representation. Advised on the cost database management optimization also expert participation.

Intern | Project Management Department | Poly Real Estate Co., Ltd., China   Jul. 2015 - Aug. 2015

- Assisted in initializing change management plan, evaluating and prioritizing change requests from contractors.
- Performed financial estimates for over 5,000 m^2 commercial real estate projects for budget control. Maintained budgeting system to support data entries and reconciliations.

EDUCATION

Delft University of Technology | Delft, Netherlands   Sep. 2016 - Oct. 2018

MSc in Construction Management & Engineering

Chongqing University | Chongqing, China   Sep. 2012 - Jul. 2016

BSc in Engineering Management & Real Estate

National Taiwan University | Taiwan, China   Feb. 2015 - Jun. 2015

Exchange in Civil Engineering, Computer-Aided Engineering Department

PROJECT WORKSHOPS

- Risk and Reliability Analysis to A Water Navigation Lock - Performed Failure Mode, Effects & Criticality Analysis (FMECA) to prioritize key lock components which lead to system failure. Conducted Fault Tree Analysis (FTA) to quantify the root-cause events and failure probabilities.
- Dutch Real Estate Valuation - Estimating the profitability of commercial and residential properties in consideration of main factors by conducting income capitalization approach and market approach.

ONLINE TRAINING

- Applied Plotting, Charting & Data Representation in Python, *by University of Michigan on Coursera*
- Applied Machine Learning in Python, *by University of Michigan on Coursera*
- Managing Big Data with MySQL, *by Duke University on Coursera*

SKILLS

Software	Python, SQL, LaTeX, Photoshop, AutodeskRevit, MS Office
Knowledge	Data Analysis, Digital Transformation, Risk Management, Asset Management
Languages	Chinese (native), English (professional proficiency), Dutch (A2)
Certificate	FRM Program - Passed FRM Exam Part I (Nov. 2019)