Chuanhai Zhu

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SUMMARY

- **To obtain a full time or intern position working as Data Scientist in summer 2016**

Master student in Industrial Engineering and Operations Research, specializing in machine learning, database management, data visualization, statistics analysis, optimization, risk modeling, project management, with added emphasis on strong programming skills and insight on engineering leadership and entrepreneurship.

EDUCATION

M.Eng, Industrial Engineering & Operations Research, University of California, Berkeley **GPA:** 3.7/4.0 *Expected May. 2016*

Coursework: Machine Learning, Statistics Learning Theory, Database Systems, Financial Engineering and Risk Theory

Ph.D., Civil & Environmental Engineering, Oklahoma State University **GPA:** 3.9/4.0 *May. 2015*

Thesis: "Characterization of Compressed Natural Gas and Diesel Pollutant Emissions for Public Transit Buses"

Specialty: Environmental Engineering, Construction Engineering and Project Management

Graduate Minor, Statistics, Oklahoma State University (OSU) **GPA:** 4.0/4.0 *May. 2015*

Coursework: Probability, Regression, Multivariate Methods, Sample Survey, Math Stat II and Stat Experimenter I & II

B.S., Environmental Science & Engineering, Tianjin University (TJU), China *Jun. 2011*

PROFESSIONAL SKILLS

Computer Skills: Python, Octave, R, MySQL, SAS, Minitab, Excel, ArcGIS, AutoCAD

Certificate: Lean Six Sigma Green Belt, APICS CPIM (In Progress), Fundamental of Engineer (Civil, Board ID: 25458)

EXPERIENCE

Data Analyst, *Design Repair Scorecard for IFIXIT,* Germany *Sep. 2015 – Present*

- Develop a repair record database containing the repair features and repair scores of over 100 electronic products, apply LASSO regression to select features.
- Develop the scoring system using Ridge regression on Python, and the L2 penalty value selected using K-fold cross validation.
- Scraping repair manual data on iFixit website by BeautifulSoup and estimate the devices' repairability based on the manual data.

Researcher, *Study on Transit Bus Fleet Emissions,* OSU, OK *Aug. 2012 – May. 2015*

- Identified uncertainty and variability of parameters by Monte Carlo Simulation; analyzed correlation relationships between 4 key pollutants emissions and 5 engine variables; developed 70 emissions and fuel use predictive models using binning, multiple linear regression and neural network technologies; developed emissions inventory for CNG and diesel bus fleets.
- Developed emission database (Over 2GB); evaluated emissions and fuel economic benefits of CNG bus compared to diesel bus; and characterized operational modes and routes impacts on emissions and fuel use of the tested buses.
- Established data collection protocols; supervised research crews using portable emission measurement system (PEMS) to collect real-world emission data from transit bus fleets (Over 180,000s); and responsible for PEMS installation and operation.

Environmental Engineer, *Clean Cities,* OK *Aug. 2013 – May. 2014*

- Gathered information about existing and planned alternative fueling stations in the Tulsa and Stillwater areas.
- Organized 2014-2015 Clean Cities Annual Statewide Stakeholder Meeting and presented the preliminary results of the emission case study of OSU transit bus fleets.
- Presented a poster at 2014 NTEA Work Truck Show; completed AFLEET emission estimation model training by Argonne National Laboratory; and presented research findings at academic webinars provided by Argonne National Laboratory.

Environmental Consultant, *China Environmental Protection Bureau,* China *Jun. 2013 – Aug. 2013*

- Conducted the survey of coal burning boilers distribution at Tianjin; presented the new type emission measurement system at the automobile emission test center located at Tianjin; and assisted in making the regulations for pollutants emissions from light-duty vehicles (Stage V).