

COLIN MIDDLETON, MS

Data
Scientist

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PROFESSIONAL SUMMARY

Recent Eastern Washington University graduate with an MS in Applied Mathematics. Completed thesis project on predicting likelihood of homelessness based on an individual's utility billing history. Strong background in applied mathematics and statistics with practical experience in data exploration, manipulation, analysis, and prediction. Seeking to launch career in the data rich environment of Wheelhouse.

SKILLS

Applied Mathematics | Statistics | Machine Learning

R | Java | SQL | Jupyter Notebooks | GitHub | LaTeX

Python: pandas numpy statsmodels scikit-learn tensorflow matplotlib seaborn

EDUCATION

Sep 2019 – Jun 2021	Applied Mathematics, MS <ul style="list-style-type: none">• GPA: 4.0• Total Credits: 79	Eastern Washington University
Sep 2013 – Dec 2017	Mathematics, BS <ul style="list-style-type: none">• GPA: 3.5• Minors: Honors, Chemistry• Total Credits: 211	Western Washington University

HONORS AND AWARDS

2021	Outstanding Graduate	Eastern Washington University
2021	Graduate Service Appointment	Eastern Washington University
2015	Math Fellowship	Western Washington University
2013	Presidential Scholarship	Western Washington University

PROJECTS

Dec 2021	Grades vs Student Characteristic	Personal Project
	<ul style="list-style-type: none"> • Used an ANOVA test to determine if there is a significant difference in grades between groups of students where groups are based on chosen characteristic such as race or neighborhood. • User-friendly web interface. • Automatically performs normality and skedasticity tests. • (Python: Streamlit) • https://github.com/middlec000/grades_vs_student_characteristic 	
Jun 2020 – Jun 2021	Homelessness Prediction	Spokane Predictive Analytics
	<ul style="list-style-type: none"> • Predicted risk of experiencing homelessness based on monthly customer utility payment data. • Used Linear Regression, Logistic Regression, Cox Proportional Hazards, and LSTM models. • Joined, filtered data and engineered new features. • Pending publication. • (Python + JupyterLab) • https://github.com/middlec000/SPA_predict_homelessness 	
Jan 2021 – Mar 2021	Academic Paper Clustering by Topic	Big Data Analytics Class Project
	<ul style="list-style-type: none"> • Collaborated on customized K-Means model to cluster text documents into groups by topic using bag-of-words TF-IDF representation and custom dot product distance metric. • Custom output with intelligible group themes. • Currently developing hierarchical (agglomerative) version for publication to PyPi. • (Python) • https://github.com/middlec000/fhdc 	
2017	Traffic Prediction Senior Project	Whatcom Council of Governments
	<ul style="list-style-type: none"> • Predicted traffic flow arriving at the US / Canadian border crossing based on upflow traffic sensors. • Employed averaging, PCA, and speed + distance ratio methods. • (Excel) 	

WORK EXPERIENCE

Oct 2018 – Current	CAD Drafter	Brooks Middleton Architect
	<ul style="list-style-type: none"> • Draft architectural drawings using AutoCAD LT. • Make design adjustments and suggestions. • Research building code and construction product specifications. 	
Nov 2018 – May 2019	CAD Drafter	Beacon Rock Architecture Group
	<ul style="list-style-type: none"> • Drafted architectural drawings using AutoCAD LT. • Researched building code. • Used Dropbox to share files. 	
Jul 2016 – Aug 2016	R & D Intern	Energy Storage Systems
	<ul style="list-style-type: none"> • Assisted with battery testing. • Helped fabricate and improve a system for evaporation and dissolution of gasses in a liquid. 	

PUBLICATIONS

In Progress	<i>Prediction of Homelessness Risk Based on Utility Payment History</i>	Eastern Washington University Thesis
	<ul style="list-style-type: none"> • Advisor: Dr. Andrew Oster • Paper based on Homelessness Prediction project - see Projects. 	