

# Ali El-Khatib

MACHINE LEARNING ENGINEER · DATA SCIENTIST · SYSTEMS ENGINEER · PROJECT MANAGER

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## Skills

<b>Programming</b>	Python, R, Julia, Matlab, C/C++, $\LaTeX$ , SQL, HTML/CSS, *nix
<b>Frameworks</b>	scikit-learn, TensorFlow, PyTorch, mlexend, NetworkX, Selenium
<b>Software</b>	Tableau, QlikView, Git, QGIS, Atlassian Suite, Microsoft Office Suite
<b>Languages</b>	English, Arabic, Spanish

## Experience

### Senior Maintenance Analyst

Reading, PA

PENSKE TRANSPORTATION SOLUTIONS

Jan. 2020 - Present

- Built & Implemented artificial intelligence models (supervised & unsupervised) to identify patterns in vehicle diagnostic trouble codes, resulting in 60% reduction of vehicle maintenance costs
- Research outputs (including machine learning algorithms, signals, and web apps) are deployed in production for forecasting demand across all customer sectors.
- Mentored new employees providing subject-matter expertise and experience resulting in 3 months reduction in new-hire orientation time
- Created and instructed training curricula for Python, R, MATLAB, Tableau, SQL
- Awarded Lean Six Sigma Black Belt certification

### Operational Excellence Project Specialist

Reading, PA

PENSKE TRANSPORTATION SOLUTIONS

Aug 2019 – Jan 2020

- Created an in-browser GIS visual mapping interface for route analysis and location planning using JavaScript, HTML, and Bing Maps API
- Developed data analysis training documentation and presentations for Lean Six Sigma Black Belt certification program
- Lead internal automation team achieving 90% reduction in effort associated with report generation and data analyses
- Developed and solved facility-location allocation problems to identify optimal placement and of maintenance facilities to maximize business coverage

### Operation Excellence Analyst

Reading, PA

PENSKE TRANSPORTATION SOLUTIONS

Aug 2018 – Aug 2019

- Designed and maintained relational databases, stored procedures, reports, and data input interfaces using SQL Server, Oracle DB, AS400
- Lead initiative to implement and formalize version control system (Git) protocols
- Imported, exported and manipulated large data sets in multi-billion-row databases under tight deadlines
- Eliminated 1.5 FTEs by automating classification of technician repair notes using NLTK and scitkit-learn

## Education

### Cornell University

Ithaca, NY

M. ENG. IN SYSTEMS ENGINEERING

Aug. 2018 - May 2020

- Awarded Computational and Data Science Certificate
- Created residual neural network resulting in 77% accuracy in detecting abnormalities in musculoskeletal X-rays
- Facilitated development of AlexNet model achieving 89% accuracy in classifying CIFAR-10 images
- Assisted in developing recommendations and best-practices to reduce greenhouse gas emissions from existing buildings in Ithaca, NY (part of Ithaca Green New Deal)

### West Virginia University

Morgantown, WV

B.Sc. IN PSYCHOLOGY

Aug. 2012 - May 2015

- Awarded WVU Foundation Outstanding Senior designation given to top 45 graduating seniors.
- Successfully defended thesis: *Attentional Bias in Political Conservatism: A Comparison of Disgust and Fear*
- Performed literature searches and conducted quantitative analytical processes of data using SPSS.