

# David M. Haralson

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## Education

**M.S. Electrical & Computer Engineering** - University of Utah (*Salt Lake City, UT*)

Thesis: *Computation Methods for Secure Energy System Operations*

**B.S. Electrical Engineering, Minor in Music** - University of Oklahoma (*Norman, OK*)

Overall GPA: 3.95

## Skills

- Proficient in Python (numpy, pandas, matplotlib, plotly), Git, and Microsoft Office
- Experience with SQL, JavaScript, Debian, Java, MATLAB, C++ and HTML/CSS

## Engineering Experience

**Risk Assessment Engineer** - WECC (*Salt Lake City, UT*)

Jun 2018 - Present

- Prepared risk-based plans for compliance oversight of 25 NERC-regulated entities
- Wrote Python scripts and SQL queries to aid in entity analysis using EIA and GADS data
- Provided analysis and recommendations on NERC registration requests
- Assessed risks to grid reliability posed by specific instances of noncompliance

**Graduate Research Assistant** - University of Utah (*Salt Lake City, UT*)

Jan 2017 - May 2018

- Implemented multiple power system solution algorithms in Java and MATLAB
- Developed computation methods for operational security in power and energy systems
- Analyzed electric and natural gas networks using mathematical optimization methods

**Controls Intern** - Johnson Controls, Inc. (*Norman, OK*)

May - Aug 2016

- Updated MATLAB and Simulink models for simulating and testing HVAC control systems
- Created simulation test sequences for commercial rooftop unit controls

**Engineering Intern** - OG&E Electric Services (*Oklahoma City, OK*)

May - Aug 2015

- Implemented test instance of a synchrophasor-based Linear State Estimator
- Expanded electric grid visibility by configuring SEL synchrophasor devices for 14 substations
- Performed protection timing coordination studies for use in stability analysis
- Prepared and imported GIS data for new transmission lines into internal database

**Operations Management Intern** - Union Pacific Railroad (*Bloomington, CA*)

May - Aug 2014

- Examined recurring reliability issues and repair processes to improve locomotive reliability
- Communicated and collaborated with technicians to find and correct suboptimal practices

## Additional Experience

**Chapter Coordinator** - MATHCOUNTS Competition Series

September 2018 - Present

- Coordinated scheduling, materials, communications, and volunteer training for local level (covering two school districts) of annual middle school math competition

**Media Chair** - IEEE OU Student Chapter

Apr 2015 - May 2016

**Corresponding Secretary** - HKN Beta Xi Chapter

- Began test prep mentoring series for ECE courses with audiences of 2 to 50 students
- Maintained website and event calendar for members to stay informed and up to date