Anthony (Tony) ElHabr

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# Education

## B.S. Electrical Engineering | may 2016 | the university of texas at austin

* Primary Technical Corer: Energy System and Renewable Energy, GPA: 3.85/4.
* Related coursework: Power Systems Engineering, Power Electronics Lab, Power Systems Lab
* Honors: Engineering Honors Program Member, Virginia & Ernest Cockrell, Jr. Scholarship in Engineering Recipient

# Skills & Abilities

## software

* Expert: R, VBA (for Excel), SQL (Oracle), Windows OS, Microsoft Office Suite
* Intermediate: python, MATLAB, PSSE, PowerWorld, HTML/CSS, git, command line
* Beginner: SAS, JavaScript, C/C++, x86 assembly language

# Experience

## MARKET OPERATIONS ENGINEER II, CONGESTION REVENUE RIGHTS (CRR) | ERCOT | 6/2017 –

* Prepare data for CRR auctions (approximately twice a month), and validate and analyze results.
* Perform ad-hoc studies of CRR and day-ahead market (DAM) trends.

#### **Projects**:

* *Auction Results Validation*: Led internal team in developing software to perform checks of auction results.
* *CRR Trend Analysis*: Investigated CRR path-specific cost-value metrics to determine whether abnormally high DAM congestion in 2017 resulted in unexpected CRR payouts.

## CO-FOUNDER/CO-LEADER, ERCOT DATA SCIENCE GROUP | ERCOT | 9/2017 –

* Help conduct monthly meetings of an internal group that discusses data science concepts and practices implementation.
* Led meetings discussing “tidy” data and creating models for logistic regression and random forests.

## Engineering development program (edp) engineer | ercot | 7/2016 -

* Completed 12-month program to provide entry-level engineers with skills for becoming successful in power industry.

#### **Projects**:

* *AutoCAD Map Improvements*: Updated base AutoCAD transmission map, evaluated various mapping software solutions for future use, and assisted Planning department with annual reports.
* *NOX Emissions Sensitivity Analysis*: Evaluated impact of varying NOX emission allowance costs on generation dispatch and compared relative influence of NOX and CO2 allowance costs.
* *5-Minute Resolution Wind Forecast Analysis*: Evaluated proposed auto-regressive (AR) model for Multi-Interval Real-Time Market (MIRTM) and analyzed accuracy of third-party vendor’s forecasts.
* *Daily Market Summary Template Improvements*: Re-wrote existing market-related SQL queries to facilitate execution on separate database and re-factored VBA code to improve readability and consistency.

## InstrUmentation engineering intern | exxonmobil | 05/2015 – 08/2015

* Created Cause & Effect Matrix for boiler safety system using software for Programmable Logic Controllers (PLCs).
* Developed plan to upgrade faulty fire detection system for turbo-expander/re-compressor system.

## Monitoring & Diagnostics Systems Support Intern | luminant | 05/2014 – 08/2014

* Improved equipment reliability displays for real time system operations using OSIsoft PI software.
* Developed new PI Asset Framework data archiving structure for equipment tags.

## Electric Distribution Planning & Computer Support Co-op | centerpoint| 01/2014 – 05/2014

* Completed 2016 Distribution Development Plan (DDP) for Hidden Valley substation using CYME software.
* Created street maps for CYME models using Geographical Information System (GIS) software.
* Updated peak-loading spreadsheets to facilitate projections of future load growth and expenses.