# Tony ElHabr

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## Education

### B.S. Electrical Engineering, May 2016, The University of Texas at Austin

* *Primary Technical Core:* Energy Systems and Renewable Energy, GPA: 3.85/4.
* *Honors:* Engineering Honors Program Member, Virginia & Ernest Cockrell, Jr. Scholarship in Engineering Recipient
* *Societies:* Officer/Member of IEEE Power and Energy Society UT Student Branch

## 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 - present day**

* 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.

**CO-FOUNDER/CO-LEADER, ERCOT DATA SCIENCE GROUP | ERCOT | 9/2017 - present day**

* Help conduct monthly meetings of an internal group that discusses data science concepts and practices implementation.

**ENGINEERING DEVELOPMENT PROGRAM (EDP) ENGINEER | ERCOT | 7/2016 - 5/2017**

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

***Projects:***

* *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:* Revised existing real-time (RT) and day-ahead market-(DAM) 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/**

* 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 improve projections of future load growth and expenses.