Anthony (Tony) ElHabr *anthonyelhabr@gmail.com (mailto:anthonyelhabr@gmail.com)*

Education

M.S. Analytics (Analytics Track), Spring 2020, Georgia Institute of Technology, GPA: 3.5/4

Working towards degree (2 classes per semester) while working full-time.

- *Notable Classes:* Discrete Optimization, Simulation, Regression Analysis, Time Series Analysis, Data and Visual Analytics

B.S. Electrical Engineering (Power Systems Track), May 2016, The University of Texas at Austin, GPA: 3.85/4

- *Honors & Societies:* Engineering Honors Program Member, Virginia & Ernest Cockrell, Jr. Scholarship Recipient; Officer/Member of IEEE Power and Energy Society UT Student Branch
- *Work Experience:* Teaching Assistant, EE438: Electronics Circuits (Spring 2016); Academic Tutor, multiple Engineering classes (2016)

Skills & Abilities

SOFTWARE

- *Advanced:* R, VBA (for Excel), SQL (Oracle), Windows OS, Microsoft Office Suite, PowerWorld, PSSE
- *Intermediate:* python, SAS, OsiSoft PiSeeq, JavaScript (Plotly and D3), HTML/CSS, git, C#, ASP.NET Web Framework
- *Used:* C/C++, x86 assembly language, MATLAB

ERCOT Experience

OPERATIONS ENGINEER II, OPERATIONS PLANNING (GRID ANALYSIS) | ERCOT | 12/2018 - present

- Develop tools and procedures to monitor transmission and generator events on the grid in real-time and up to 90 days in the future.

Major Projects & Responsibilities:

- *Trend Analysis Tool*: Assist with development and maintenance of internal web-based BI dashboards for analyzing daily market and operational information.
- *Voltage Profile Seasonal Studies:* Conduct seasonal studies coordinated with Transmission Service Providers (TSPs) to define generator voltage setpoints.
- *N-1-1 Tool:* Developed high performance power flow tool to evaluate N-1-1 contingencies on a daily basis.

MARKET OPERATIONS ENGINEER II, CONGESTION REVENUE RIGHTS (CRR) | ERCOT | 6/2017 - 12/2018

- Prepared data for CRR auctions (about twice a month), and validated and analyzed results.

Studies:

- *Price Convergence:* Evaluated correlations among settlement point prices across CRR, DAM, and Real-Time Market (DAM). Created price contour maps for illustrative purposes.
- *Bidding Behavior:* Studied popularity of "penny bids", fixed hedges, and portfolio diversity among CRR participants.
- *CRR Validation:* Led group of CRR and Market Analysis team members in developing automated SAS tool (set of programs) to perform checks of CRR optimization output.

CO-FOUNDER/CO-LEADER, ERCOT DATA SCIENCE GROUP | ERCOT | 9/2017 - present day (19 meetings total)

- Schedule speakers for periodic meetings of an internal group that discusses data science concepts and their implementation.
- Personally given 4 presentations: (1) R and the "tidyverse"; (2) logistic regression; (3) live-coding of solutions assigned exercises; (4) SQL tips and tricks.

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:

- *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.

Pre-ERCOT Experience

INSTRUMENTATION ENGINEERING INTERN | EXXONMOBIL | 05/2015 - 08/2015

MONITORING & DIAGNOSTICS SYSTEMS SUPPORT INTERN | LUMINANT | 05/2014 - 08/2014

ELECTRIC DISTRIBUTION PLANNING & COMPUTER SUPPORT CO-OP | CENTERPOINT| 01/2014 - 05/2014