

EXPERIENCE

- **BKO AI, Inc.** Houston, TX
Analytics Engineer, Data Scientist *Jan. 2022 - Present*
 - Analyzed data across nearly 20 furnaces corporated with Owens Corning Company, built suitable **pandas.DataFrame** to map out over 2000 calculation variables, established more than 50 **Python** functions to automatically calculate and monitor the running status of furnaces in real time, saved at least 80% time by eliminating the need for labor-intensive recalculation of the manual calculation method.
 - Created virtual refinery facilities and utilized **PI Web API** with Python to integrate data. Designed a dashboard UI on **Databricks** to visualize data charts for each facility, enabling customized selections.
 - Developed an API call framework to retrieve JSON-format data from Pharos AMS on a monthly basis, utilizing an authorized API token, formatted and updated the data to meet Talen Energy requirements. Migrated 984 signals from Pharos AMS to **OSisoft PI** data archive through 16 different API calls.
 - Designed a cloud data storage method to provide backup data when data is lost or disconnected on **SeeQ Data Lab** with **Python** Code, solved the problem of displaying an error when the data is disconnected, and created a new feature for Svante Technologies Company Product Dashboard.
- **BKO AI, Inc.** Houston, TX
Analytics Engineer Intern *May. 2022 - Aug. 2022*
 - Collaborated with SeeQ company in pulling and analyzing 1 year's data of Wolf Hollow Power Plant located in Texas, achieved data preparation with dimensionality reduction using **Python**.
 - Developed machine learning algorithms to replace the old models and obtain insights into trends from different modules of the power plant, delegated features and bug fixes, improved the prediction performance by 10%.
 - Designed an optimization algorithm to provide optimal input combinations based on the company's billing and technical restrictions. Built and deployed a Python Web Application with **Docker** to visualize the output.
 - Programmed and deployed a platform system with **Azure** functions and Cloud endpoints, leveraged APIs to parallelize analytics of real-time Power Plant data to provide actionable insights.
- **University of Houston – Real-time tracking and control of robotic jellyfish** Houston, TX
Research Assistant, Advisor: Prof. Zheng Chen *May. 2019 - Dec. 2022*
 - Led the design and fabrication of jellyfish robot, built an artificial neural network(ANN) model to explore the displacement of the robot based on the outputs from the sensors by combining **Python** and **MATLAB**.
 - Developed an online learning framework for displacement feedback control of the robot based on **Reinforcement Learning (RL)**, avoided the complex model building and the instability of dynamic control, achieved letting the jellyfish robot stability in a certain position underwater.
- **University of Houston – Rare Event Classification in Multivariate Time Series** Houston, TX
Research Assistant, Advisor: Prof. Ying Lin *Aug. 2018 - May. 2019*
 - Participated in the early stage of extracting and filtering over 1 million similar multivariate time series data from a pulp-and-paper industry to investigate the unwanted event in the process—a paper break.
 - Operated and maintained database by using **R**. Used RuleFit to discover the hidden rules that may be predictive of the break event with **Python**.
 - Built a predictive model based on the 18,398 records, generated 710 factors with 61 variables, that come from statistical summarizations, progression trajectories, and non-random longitudinal patterns.

PROGRAMMING SKILLS

- **Languages:** Python, SQL, Java, Matlab, JavaScript, HTML, CSS, C#
- **Technologies:** Databricks, Git, PySpark, Pandas, Azure, Docker, Sklearn, Numpy

EDUCATION

- **University of Houston** Houston, TX
PhD. in Mechanical Engineering; *Aug. 2018 – Dec. 2022*
- **Georgia Institute of Technology** Atlanta, GA
Master of Science in Computer Science; *Jan. 2021 – Dec. 2022*
- **HeFei University of Technology** Hefei, China
Master of Science in Mechanical Engineering; *Sep. 2015 – May. 2018*
- **Huazhong Agricultural University** Wuhan, China
Bachelor of Engineering in Mechanical Engineering; *Sep. 2011 – July. 2015*