Yi-Li Chen (Leo)

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EDUCATION

University of Southern California (USC)   **Los Angeles, CA**
Masters in Analytics   *Aug 2019 – May 2021*
- *Relevant Coursework: Machine Learning for Data Science, Data Management, Data Mining, Text Analytics, Integrative Analytics, Predictive Analytics, Optimization Methods for Analytics*

National Central University (NCU)   **Taoyuan, Taiwan**
Masters in Mechanical Engineering   *Sept 2017 – Nov 2018*

PROFESSIONAL SKILLS

- Programming: SQL, Python (scikit-learn, matplotlib, pandas, numpy), R (dplyr, tidyverse, ggplot2), JavaScript
- Computer Skills: Microsoft Office, Jupyter, PyCharm, R Studio, Git, MySQL, PostgreSQL
- Visualization: Tableau, MS Excel
- Expertise: NLP, Web Scraping, Regression, Clustering, Classification, Statistical Modeling, Hypothesis Testing, A/B Testing, Time-Series Forecasting, Exploratory Data Analysis, Data Mining, Data Visualization

WORK EXPERIENCE

Academia Sinica (Data Analysis)   **Taipei, Taiwan**
Research Assistant   *Apr 2019 – Jul 2019*
- Conducted Python and SQL analyses on the over 1-million data from noisy wireless signal
- Utilized dimensionality reduction to project the high-dimensional feature to 2D space for visualization
- Provided quantitative, visual explanations and critical features for the machine learning process

ANALYTICS PROJECTS

- **Intelligent Sensor Measurement Analysis and Reporting (PowerPoint, Excel)**   *Sept 2017 – Oct 2018*
  - Rebuilt and Organized the data from an outside source of measurement in Excel
  - Created pivot tables and charts using worksheet data and external resources to achieve analytical goals
  - Created and incorporated charts, graphs, and other visual aids such as animations in PowerPoint
- **A linked knowledge base of crime data (Python, pgAdmin, PostgreSQL)**   *Fall 2019*
  - Analyzed the crime dataset of LA to visualize integrated results to solve different specific problems
  - Cleaned and visualized over 2 million entries of the data by using pandas/matplotlib libraries in Python
  - Used ISI's T2WML to extend Wikidata and create a linked Knowledge Base for Crime Data with pgAdmin
- **Recipe Recommendation System (Python, Web scraping)**   *Spring 2020*
  - Built a recipe recommendation system that can help users to customize the meal by desired preference
  - Scraped several hundred-thousands of recipes and reviews from the website with Selenium and BS4
  - Modeled an optimization problem for meal planning system with Pyomo library after collaborative filtering
  - Recommend an optimized weekly meal plan with 90% level of satisfaction
- **NLP-based comedian recommender system (Python, NLTK, TextBlob, Hypothesis Testing)**   *Fall 2020*
  - Recommend a stand-up comedian who is similar to a given stand-up comedian based on scripts content
  - Applied LDA for content-based filtering on transcripts and vectorized comedians with GMM
  - Applied sentiment analysis and matrix completion on the scraped comments to build users matrix
  - Predicted user's preference in ML with the combined matrix and improved the accuracy rate by 6%
- **Airbnb Data Mining (R)**   *Fall 2020*
  - Incorporated several hundred-thousands of crime data and recommend the housing location for leasing
  - Analyzed, visualized and modeled the data by using tidyverse/ggplot/ggmap/rpart libraries in R
  - The accuracy of predicting the price of Airbnb clustering is greater than 85%
- **Facial Recognition Website (JavaScript, React, Node, PSequel, PostgreSQL)**   *Fall 2020*
  - Developed a full-stack web app across various platforms with Flexbox
  - Applied API key to Clarifai Models and do facial recognition on the front-end
  - Set up the server and manage users data in PostgreSQL on backend database
- **Hospital Performance Analysis and Visualization (Tableau)**   *Spring 2021*
  - Conducted research with Keck hospital and improve management with KPI in healthcare
  - Analyzed and visualized the real-world data from USC Keck hospital via Tableau and Tableau Prep Builder

LEADERSHIP & EXTRACURRICULUM

Capstone Project Case Competition   **Taipei, Taiwan/ Higashi-Hiroshima Japan**
Representative   *Sept 2016 – Jul 2017*
- Designed a wearable voice-activated bionic hand with Arduino board and Bluetooth module
- On behalf of the department to make a presentation at Hiroshima University in Japan