Ted Jesus C. Chua

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Education

BSc, Economics — Emory University, Atlanta, GA, 2017 – 2021

- Coursework: Econometrics, Financial Econometrics, Mathematical Statistics, Advanced Statistics, Abstract Vector Spaces, Linear Algebra, Linear Optimization, Nonlinear Optimization, Empirical Methods & Machine Learning

Professional Experience

University of Chicago Crime Lab — Chicago, IL

Data Analyst — Mar 2024 – Present

- Translate research problems into robust programming solutions in a randomized controlled trial setting
  - **Implemented simulation-based power analysis in Python** to estimate the minimum detectable effect of the Policing Leadership Academy (PLA) on violent crimes, discretionary arrests, and clearance rates
  - **Designed a data transfer pipeline through the Box Python SDK** to securely upload/download confidential policing data to/from Box, circumventing local devices as an intermediary
  - **Lead the data transformation and analysis of National Incident-Based Reporting System (NIBRS) master files,** culminating to 30 analytical data assets totaling 75 million records
- Mentor junior team members to foster collaboration and improve overall productivity
  - Train three analysts through real-time walkthroughs of frameworks and internal tools on an ad-hoc basis
  - Authored an 8-page training document for a summer intern, highlighting best practices for Python development in the context of outstanding analytical tasks
  - Modernized a research project's data infrastructure by orchestrating pipelines using GNU Make and introducing proper workflows to the analytics team

Associate Data Analyst — Jul 2022 – Feb 2024

- Provided analytical support to violence intervention initiatives
  - **Wrote and deployed a web scraper in Python** that autonomously collected 5000+ pages of tables from a public database to extract critical data for the Policing Leadership Academy's (PLA) outreach efforts
  - **Spearheaded the integration of the FBI Crime Data API in Python** onto PLA's data infrastructure through an end-to-end pipeline that queries and analyzes agency-level crime statistics
  - **Conducted regression analyses in R** to finalize study findings for Youth Advocate Programs
- Presented weekly reports to internal staff for strategic decision-making and external communications

Projects

FBI Data Decoder **(Python)** — Fall 2024

- Designed a tool that decodes and extracts data segments from the FBI's National Incident-Based Reporting System (NIBRS) master files, including integration with AWS S3 for the output stream.

Geospatial Analysis of Chicago Neighborhoods **(Python, SQL, Tableau)** — Fall 2023; Summer 2024

- Sourced & harmonized administrative datasets from the US Census Bureau API and Chicago Data Portal into a local PostgreSQL database.
- Created a Tableau dashboard to visualize robbery rates with three overlay options for demographic estimates.

Can We Predict the Genre of a Song Based on its Audio Features? **(Python)** — Spring 2020

- Examined the inter-connectivity of music with tree-based methods—decision tree and random forest models—using audio features from Spotify.

Additional Info

Languages: Filipino, English
Software: Python, R, Tableau, PostgreSQL
Personal Website: teddythepooh.netlify.app
Tableau Profile: https://public.tableau.com/app/profile/ted.chua/